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Pinellas Environmental Restoration Project
Sitewide Environmental Monitoring
Quarterly Progress Report
for the
Young - Rainey STAR Center

July through September 2002

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Prepared by
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Acronyms and Abbreviations

AST	air stripper tower
BTEX	benzene, toluene, ethylbenzene, and xylene
°C	degrees Celsius
CMS	Corrective Measures Study
CMIP	Corrective Measures Implementation Plan
DCA	dichloroethane
DCE	dichloroethene
DOE	U.S. Department of Energy
ECL	environmental checklists
EPA	U.S. Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
ft	feet
ft/ft	feet per foot
HSWA	Hazardous and Solid Waste Amendment
ICM	interim corrective measures
IMW	Interim Measures Work (Plan)
IWNF	Industrial Wastewater Neutralization Facility
MCL	maximum contaminant level
MSL	mean sea level
µmhos/cm	micromhos per centimeter
µg/L	micrograms per liter
mg/L	milligrams per liter
mV	millivolt
NAPL	non-aqueous phase liquid
NTU	Nephelometric Turbidity Units
PCIC	Pinellas County Industrial Council
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFP	request for proposal
RPD	relative percent difference
STAR Center	Young – Rainey Science, Technology, and Research Center
STL	Severn Trent Laboratories
SWMU	solid-waste management unit
TCE	trichloroethene
TVOCs	total volatile organic compounds
VOCs	volatile organic compounds
WWNA	Wastewater Neutralization Area

1.0 Introduction

The Young - Rainey Science, Technology, and Research Center (STAR Center) is a former U.S. Department of Energy (DOE) facility constructed in the mid-1950s in Pinellas County, Florida. The 99-acre STAR Center is located in Largo, Florida, and lies in the northeast quarter of Section 13, Township 30 South, Range 15 East (Figure 1). The STAR Center, while owned by DOE, primarily manufactured neutron generators for nuclear weapons. Other products manufactured at the STAR Center have included radioisotopically powered thermoelectric generators, thermal batteries, specialty capacitors, crystal resonators, neutron detectors, lightning-arrestor connectors, and vacuum-switch tubes. In 1987, the U.S. Environmental Protection Agency (EPA) performed a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) at the site to gather information on potential releases of hazardous materials. In February of 1990, EPA issued a Hazardous and Solid Waste Amendment (HSWA) permit to DOE, enabling DOE to investigate and perform remediation activities in those areas contaminated by hazardous materials resulting from DOE operations. On March 17, 1995, DOE sold the facility to the Pinellas County Industrial Council (PCIC). The sales contract included clauses to ensure continued compliance with Federal, State, and local regulations while DOE remediates the site. On July 1, 1999, the PCIC was disestablished and ownership of the STAR Center changed to the Pinellas County government. In November 2000, the State of Florida received HSWA authorization from the EPA. The Florida Department of Environmental Protection (FDEP) issued a new HSWA Permit to DOE in January 2002.

Administration of DOE activities at the facility is the responsibility of the DOE Idaho Operations Office. Responsibility for environmental restoration activities, conducted under the EPA RCRA Corrective Action Program of 1984, was transferred from DOE's Pinellas Area Office to DOE's Grand Junction Office in October 1997. S.M. Stoller Corporation (Stoller), a prime contractor to the DOE Grand Junction Office, provides technical support to DOE for remediation and closure of all active solid-waste management units (SWMUs) on site.

Ground water monitoring and remediation are also ongoing at the 4.5 Acre Site. The 4.5 Acre Site is a parcel of land that was originally part of the DOE facility but was sold to a private individual. In 1984, ground water contamination was discovered at this site. Currently, DOE leases the site from the land owner and is actively pursuing ground water cleanup. The 4.5 Acre Site is under purview of Florida State regulations enforced by the FDEP. A summary of remediation activities can be found in the *Interim Remedial Action Quarterly Progress Report for the 4.5 Acre Site.*

The EPA RFA Report and the HSWA permit identified 15 sites at the former DOE facility that may have experienced environmental contamination as a result of past activities. Upon completion of the RCRA Facility Investigation, 11 of the 15 SWMUs were recommended by DOE and approved by EPA Region IV and the FDEP for no further action (DOE 1994). A twelfth site, the Former Pistol Range Site, was remediated in 1993 and recommended by DOE and approved by EPA Region IV and the FDEP for no further action.

Two additional SWMUs, the West Fenceline Site and the Wastewater Neutralization Area/ Building 200 (WWNA/Building 200), were identified after the HSWA permit was issued, bringing the total to 17 SWMUs that have been identified and investigated at the STAR Center. Remediation of the West Fenceline Site was completed in 1997 and DOE recommended, and EPA Region IV and FDEP approved, no further action. A Corrective Measures Study

(CMS)/Corrective Measures Implementation Plan (CMIP) was prepared and submitted in 1997 to EPA Region IV and FDEP to address the contamination at the WWNA/Building 200 Area.

Therefore, there are currently four sites that have contamination in the surficial aquifer ground water at levels in excess of protective standards. These four SWMUs, the Old Drum Storage Site (PIN06), the Industrial Drain Leaks-Building 100 Area (PIN12), the Northeast Site (PIN15), and the WWNA/Building 200 Area (PIN18), are undergoing remediation activities. Two SWMUs, PIN06 and PIN12, are currently being remediated together because of their similar ground water contamination and proximity. These two SWMUs are collectively known as the Building 100 Area. Figure 2 depicts the location of the four SWMUs.

Additional background information relative to each SWMU is briefly described below. This document also serves as the quarterly progress report for each of these four SWMUs. The results of monitoring activities, a summary of the treatment system performance, and a summary of ongoing and projected work are provided in this report.

1.1 Building 100 Area

The Building 100 Area (PIN06 and PIN12) is located in the southeast portion of the STAR Center. The Old Drum Storage Site is the former location of a concrete storage pad equipped with a drain and containment system used to store hazardous waste including dichloromethane (also known as methylene chloride), ignitable liquids, arsenic, and calcium chromate solids (DOE 1987a). Empty drums containing residual waste solvents were also stored in this area (DOE 1987b). The concrete pad was located near the northwest corner of Building 100. The pad was removed in October 1983 in accordance with an FDEP closure permit (DOE 1987a), and a closure report was submitted to the FDEP in August 1986 (DOE 1986). The decommissioning of the pad and the cessation of drum storage effectively removed the potential for a future contaminant source at PIN06.

Building 100 is the largest building at the STAR Center and covers approximately 11 acres. In the past, offices, laboratories, and production facilities for the DOE were housed in the building. SWMU PIN12 consists of the liquid waste drainage system serving Building 100. Four individual drainage systems (sanitary, chemical, health physics, and storm water) were present within the building. In 1989, all four drainage systems were investigated, including verifying the system routing and the condition of underground and above-ground piping and ancillary equipment (EMC 1989). As a result of this investigation, the health physics and chemical drainage systems were flushed, grouted, and abandoned (DOE 1997). Some of the chemical drain lines were replaced by an above-ground system currently used by tenants of the building.

A CMS and CMIP were completed and approved for the Building 100 Area because volatile organic compounds (VOCs) concentrations measured in ground water at the Old Drum Storage Site (PIN06) and one monitoring well located at the northwest corner of Building 100 (PIN12) exceeded the Safe Drinking Water Act and FDEP maximum contaminant levels (MCLs). Subsequent investigations revealed elevated VOCs concentrations under Building 100 and downgradient to the southeast as well. On August 15, 2000, the EPA approved the Building 100 CMIP Addendum. The FDEP approved this same document on November 15, 1999.

Commencing in May 2001, DOE began an analysis of the potential remediation strategies for the three Building 100 Area tasks: plume control, source treatment, and dissolved phase treatment.

The *Building 100 Area Remediation Technology Screening Report* (DOE 2001) was prepared and assembled a list of remediation technologies, categorized them into the remediation tasks, and conducted an initial screening of the technologies. This initial screening eliminated the technologies that obviously would not work and recommended technologies that should be retained for detailed evaluation at a later time. The final technology for each task will be identified at a later date.

The *Building 100 Area Plume Control Technology Selection Report*, prepared in February 2002, conducted a detailed evaluation of five plume control technologies and recommended a technology that should be implemented for plume control at the Building 100 Area. Based on this evaluation, enhanced bioremediation was recommended to control the contaminant plume.

1.2 Northeast Site

In the late 1960s, before construction of the East Pond, drums of waste and construction debris were disposed of in the swampy area of the Northeast Site. The East Pond was excavated in 1968 as a borrow pit. In 1986, an expansion of the East Pond was initiated to create additional storm-water retention capacity. Excavation activities ceased when contamination was detected directly west of the East Pond. EPA identified the Northeast Site as a SWMU. An Interim Corrective Measures (ICM) Study was developed and submitted to EPA and approval of this document was received in October 1991. An interim ground water recovery system for the Northeast Site was installed, and operation commenced in January 1992. The implementation of this ICM system at this site is consistent with the regulatory goals of the EPA's RCRA Corrective Actions (Subpart S).

The ICM system, as initially installed, consisted of four recovery wells equipped with pneumatic recovery pumps, a holding tank, centrifugal transfer pumps, and approximately 2,500 feet (ft) of transfer and secondary containment piping. During 1993, DOE proposed a reconfigured system for the site consisting of four shallow and three deep recovery wells. After EPA approved the system upgrade, the system was reconfigured and became operational on March 1, 1994.

Between August and October 1995, after EPA and FDEP approval, a portion of the Northeast Site was excavated to remove debris and other materials that could inhibit future corrective measures. Location of the areas of excavation was based primarily on the results of a geophysical survey and knowledge of existing utility locations. Detailed descriptions of the debris removal activities were submitted to EPA and FDEP as part of the *Northeast Site Interim Measures Quarterly Progress Report* (DOE 1996).

In 1996, DOE submitted a CMIP to EPA Region IV and FDEP. This plan was approved by both regulatory agencies in 1997. As part of the Northeast Site CMS and CMIP, a pump-and-treat system in conjunction with a subsurface hydrogeologic barrier wall to prevent migration of the contaminant plume was identified as the best available technology. A pretreatment system for iron removal, an air stripper unit, and a tank for holding treated ground water before discharge to the Pinellas County Publicly Owned Treatment Works were recommended. The treatment system was constructed in early 1997 and became operational by July 1997 with seven Northeast Site recovery wells and two Building 100 recovery wells pumping to the system influent tank. Subsequently, several additional recovery wells were installed, and some of the old recovery wells were abandoned.

During 1997, anaerobic bioremediation and rotary steam stripping pilot tests were conducted in the northern and southern portions of the Northeast site, respectively. These tests were designed by an Innovative Treatment Remediation Demonstration group of regulatory and industry members to provide remedial options at the STAR Center. At the conclusion of the field tests in July 1997, pump-and-treat technology resumed at the Northeast Site.

An *Interim Measures Work (IMW) Plan for Remediation of Non-Aqueous Phase Liquids at the Northeast Site* was submitted to the FDEP in late November 2001. The purpose of this document was to present the plan for the interim measure to remediate non-aqueous phase liquids (NAPLs) at the Northeast Site. An ICM is warranted because it supports the long-term corrective action to remediate the dissolved phase contamination in the surficial aquifer to FDEP drinking water MCLs. Without this measure, NAPLs will continue to act as a source of dissolved contamination, resulting in contaminant concentrations in ground water well above the MCLs. The FDEP approved this document on January 10, 2002.

Concurrent with the preparation of the IMW Plan, an Environmental Checklist recommending Categorical Exclusion was prepared and approved by DOE on December 19, 2001. The Categorical Exclusion pathway was approved based upon the fact that the NAPL remediation of Area A is a small-scale, short-term cleanup action and the siting, construction, and operation of treatment facilities are temporary and pilot-scale in size.

1.3 WWNA/Building 200 Area

The WWNA/Building 200 Area includes the active Industrial Wastewater Neutralization Facility (IWNF), the area around Building 200, and the area south of the neutralization facility. The IWNF refers to the physical treatment facility that currently receives sanitary and industrial wastewater and has been in operation since 1957.

A CMS Report and CMIP were completed in 1997 for this SWMU because vinyl chloride, trichloroethene (TCE), and arsenic were detected in surficial aquifer ground water at concentrations above Federal and State MCLs. The recommended remediation alternative for the WWNA/Building 200 Area was ground water recovery with the Building 100 Area wells and an additional recovery well located in the WWNA. The CMIP recommended that recovered water from the additional well be discharged directly to the IWNF and that the recovery well in the WWNA/Building 200 Area will withdraw surficial aquifer ground water directly from the arsenic plume and thereby reduce the contaminant mass and prevent contaminant migration.

The FDEP response to the CMS/CMIP concerning arsenic soil contamination in the upper 2 ft suggested that a treatment technology, air sparging, was eliminated too early. DOE then proposed a multi-phased Interim Action that included operating the recovery well for 6 months, then pulsing the system, as well as performing geochemical analyses and leaching studies of the site. On January 21, 1999, FDEP approved the proposed interim remedial action.

Additionally, EPA Region IV also approved the interim remedial action and concurred with the FDEP's position regarding the arsenic contamination. The EPA also requested an addendum or modification to the CMIP that addresses DOE's final selection of the remediation technology and a timeline for the completion of these activities.

In early June 1999, the WWNA recovery well commenced operation. All arsenic concentrations from the WWNA recovery well, PIN18- RW01, were below the STAR Center's daily maximum discharge standard for arsenic in wastewater of 0.20 milligrams per liter (mg/L) until shutdown.

Additional details concerning the impacts of ground water extraction are reported in the WWNA/Building 200 Area CMIP Addendum (DOE 2000b). Modifications to the recovery of ground water were proposed based on data collected through November 1999 and consisted of the installation of two new recovery wells screened at shallow intervals. The CMIP Addendum was submitted to the regulators and approved by FDEP and EPA. A Statement of Basis (DOE 2000a) was issued by DOE in late September 2000. This document provides a summary of environmental investigations and proposed cleanup alternatives for the WWNA/Building 200 Area. Current activities at the WWNA include ground water extraction from two recovery wells, PIN18- RW02 and -RW03, and discharge to the STAR Center's wastewater system. Table 1 depicts the results of the analysis of arsenic in ground water that is being recovered from these two wells.

1.4 Site Update

Construction activities for the Northeast Site Area A NAPL remediation continued throughout this quarter, culminating on Thursday, September 26, 2002, with startup of the remediation system. Initially, extraction wells will be operated in order to gain hydraulic control of the ground water regime beneath Area A. Remediation efforts will continue into the next quarter with the continuation of hydraulic control, commencement of the electrical resistive heating and finally injection of steam. Remediation efforts will continue for approximately 18 weeks and be completed in January 2003. Further discussion of the NAPL remediation at Area A can be found in the *Interim Measure Progress Report for Remediation of Non-Aqueous Phase Liquids at the Northeast Site, July - September 2002*.

The *Request for Proposal* (RFP) *for In Situ Enhanced Bioremediation to Control the Plume of Dissolved Contaminants at the Building 100 Area at the Young - Rainey STAR Center* was issued in early July 2002. This document seeks a conceptual design and cost estimate to implement an enhanced bioremediation plume control system. The procurement will require a design and cost to perform a field pilot test. Award of the full-scale plume control option will be dependent on success of the pilot test and a best and final offer.

Eight vendors responded to the RFP. Each of the eight proposals was individually evaluated under a Technical Evaluation Plan. Initial review of the eight proposals indicated that all, except for one proposal, were responsive under the General Criteria from the Minimum Technical Requirements section of the Technical Evaluation Plan. Each of the seven remaining proposals was evaluated under the Detailed Technical Evaluation Criteria. An evaluation based on lowest cost per technical point award based on greatest total, technical and cost points was then completed. The award will be announced in mid November 2002.

Two Environmental Checklists (ECL) recommending categorical exclusions for the Northeast Site Area B NAPL remediation and the Building 100 Area enhanced bioremediation pilot test were prepared in August and September 2002, respectively. The ECLs are being evaluated and decisions are expected early in the next quarter.

1.5 Quarterly Site Activities

Stoller personnel conducted the following tasks at the STAR Center to fulfill the requirements of the scope of work for annual sampling:

- Obtained water-level measurements from all accessible monitoring wells, recovery wells, and ponds on July 9 and 10, 2002.
- Conducted the quarterly sampling event in July 2002. This included collecting water samples from 122 monitoring and recovery wells. VOC samples were collected at 112 wells. Sampling for RCRA metals was conducted at 78 Building 100 Area wells. Arsenic sampling was conducted at 10 WWNA wells.
- Reported the results of quarterly sampling events (this document).

2.0 Water-Level Elevations

2.1 Work Conducted and Methods

Within a 29-hour period on July 9-10, 2002, depth-to-water measurements were taken at all accessible monitoring wells and extraction wells at the STAR Center. The water levels were measured with an electronic water-level indicator with the exception of some of the ponds, which are measured with gauging stations. Ground water and surface-water elevations are listed in Table 2.

2.2 Ground Water Flow

Ground water and surface-water elevations were used to construct sitewide ground water contour maps of the shallow and deep surficial aquifers (Plates 1 and 2, respectively). Individual contour maps were also constructed for the shallow and deep surficial aquifers at the Northeast Site and the Building 100 Area (Figure 3 through Figure 6, respectively). All data points except the surface-water level from the South Pond (PIN37-S001) were honored when constructing the interpretive contours. The water level in the South Pond was measured to be about 4 ft lower than in the Southwest Pond and other shallow wells at the Building 100 Area. Thus, it is suspected that the water level in the South Pond was measured inaccurately. This water level will be carefully checked in October 2002.

The water levels throughout the STAR Center indicate that the water table is highest in the north-central and west-central parts of the site (Plates 1 and 2). As ground water flows from this recharge area, it essentially disperses to the west, north, and east. These flow patterns are similar for both the shallow and deep surficial aquifers.

At the Northeast Site, ground water flow patterns, especially in the deep surficial aquifer, are greatly affected by withdrawals from eight active recovery wells. Three recovery wells were abandoned in April 2002 as part of NAPL treatment activities. The cones of depression resulting from the pumping of the active recovery wells are particularly evident on Figure 4. The overall

influence of the recovery wells in the deep surficial aquifer extends from beyond the East Pond to the west fence, and from the slurry wall to beyond the south fence (Plate 2).

Along the northern boundary of the Northeast Site, the contours near the slurry wall indicate that the wall continues to be a significant barrier to ground water flow. As seen on Figure 4, there is a differential of about 2.5 ft between the downgradient and upgradient side of the wall as measured in monitoring wells PIN15-M24D and -M33D. This differential is similar to that observed in previous quarters and continues to suggest that only a minimal amount of ground water recharge to the deep surficial aquifer is derived from the pond. Otherwise, the differential between these two wells would be smaller and the ground water gradient would be steeper near the pond, indicating recharge to the ground water system. The flow patterns of the water table immediately west of the East Pond, however, indicate that the pond is recharging the shallow surficial aquifer (Figure 3).

In the shallow surficial aquifer just south of the Northeast Site, the hydraulic gradient was approximately 0.018 feet per foot (ft/ft). Using Darcy's Law, along with approximations of 1 ft/day for hydraulic conductivity and 0.3 for effective porosity, ground water in the southern part of the site is estimated to move about 22 ft/year toward the north (i.e., toward the on-site extraction wells) under conditions influenced by pumping. This velocity is similar to that estimated in April 2002 (19 ft/year). In the deep surficial aquifer, the radius of influence from the recovery wells is interpreted to extend roughly 140 ft south of the south fence (Figure 4).

In the south-central part of the STAR Center, deep surficial aquifer flow is influenced by ground water withdrawals from recovery wells PIN12- RW01 and - RW02 in the northwest corner of Building 100 (Figure 5). In addition, shallow surficial aquifer flow is influenced by withdrawals from recovery well PIN18- RW03 at the WWNA. Shallow ground water beneath Building 100 was relatively flat in April 2002, but flowed to the northwest and southeast in July 2002. Shallow ground water at the WWNA flows to the southeast, except where affected by recovery well withdrawals. The hydraulic gradient beyond the influence of pumping at the Building 100 Area was about 0.002 ft/ft. Using the approximations mentioned above, ground water flow velocity in these areas is estimated to be less than 3 ft/year.

Water-level elevations in the three wells screened in the upper part of the Floridan aquifer are presented in Table 3. The elevations in these wells indicate that the potentiometric surface of the Floridan aquifer at the site is essentially flat.

A downward vertical hydraulic differential of approximately 7.1 ft existed between the surficial aquifer wells and Floridan aquifer wells at the Northeast Site. Table 4 illustrates the vertical hydraulic differential. This differential is consistent with the historical range of 5 to 9 ft.

Surface-water elevations were recorded from the East, South, and Southwest Ponds at the site and are presented in Table 5. The water level in the West Pond was inadvertently missed, and it is suspected that the South Pond level was misread. The ponds are hydraulically connected to the shallow surficial aquifer system. The South and Southwest Ponds elevations have always been essentially the same.

3.0 Ground Water Sampling and Analytical Results

3.1 Work Performed

During annual sampling in July 2002, ground water samples were collected from 122 monitoring and recovery wells. One hundred twelve (112) samples were analyzed for VOCs using EPA Method 8021. Seventy-eight (78) samples were analyzed for RCRA metals including arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Mercury was analyzed using EPA Method 7470, the other metals were analyzed using EPA Method 6010. Ten additional samples were analyzed for arsenic using EPA Method 6010. Laboratory reports are provided in Appendix A.

During the period of July 1 to September 30, 2002, the remediation system influent and effluent at the Northeast Site, as well as selected recovery wells at the Northeast Site, were also sampled. Analytical results for remediation system VOCs, iron, and hardness (as $CaCO_3$) sampling are provided in Appendix B. Laboratory reports for the WWNA analyses are provided in Appendix C.

All samples were collected in accordance with the Stoller *Sampling Procedures for the Young - Rainey STAR Center* (DOE 2002), using FDEP procedures. All samples collected were submitted to Severn Trent Laboratories (STL) for analysis. STL is accredited by the Florida Department of Health in accordance with the National Environmental Laboratory Accreditation Conference, certification number E84282. The majority of monitoring wells were micropurged using a dedicated bladder pump, and sampling was performed when the field measurements stabililized. The remaining wells were conventionally purged with a peristaltic pump or a 2-inch diameter stainless-steel submersible pump; purging was considered complete once field measurements had stabilized. Extraction wells were sampled using their associated flowlines with dedicated sampling ports. Table 6 lists field measurements of pH, specific conductance, dissolved oxygen, oxidation-reduction potential, turbidity, and temperature recorded at the time the sample was collected. Measurements were made with a flow cell and a multiparameter instrument.

3.2 Analytical Results

3.2.1 Northeast Site (PIN15)

VOCs and benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations in samples collected from wells at the Northeast Site (PIN15) are included in Table 7 and Table 8, respectively. Table 9 provides data on additional VOCs detected that are not included in Table 7 or Table 8. Table 7, Table 8, and Table 9 also show the previous 3-quarter's data for comparison purposes. Figure 7 shows the total VOCs (TVOCs) concentrations and includes BTEX compounds.

No VOCs were detected in the 17 monitoring wells listed below:

PIN15-0514	PIN15-0559	PIN15-0563	PIN15-M29D	PIN15-M32S
PIN15-0515	PIN15-0560	PIN15-0564	PIN15-M29S	
PIN15-0516	PIN15-0561	PIN15-0565	PIN15-M31S	
PIN15-0530	PIN15-0562	PIN15-M27S	PIN15-M32D	

The 17 monitoring and recovery wells listed below contained detectable VOCs:

PIN15-0535	PIN15-0566	PIN15-M34D	PIN15- RW13	PIN15- RW17
PIN15-0536	PIN15-0567	PIN15- RW06	PIN15- RW14	
PIN15-0537	PIN15-M27D	PIN15- RW11	PIN15- RW15	
PIN15-0538	PIN15-M31D	PIN15- RW12	PIN15- RW16	

TVOCs concentrations ranged from below detection limit to 206,600 micrograms per liter (µg/L) in well PIN15−RW06. The compound detected at the highest concentration in PIN15−RW06 was methylene chloride at a concentration of 120,000 µg/L.

3.2.2 Building 100 Area (PIN12)

VOCs concentrations in samples collected from wells sampled at the Building 100 Area (PIN12) are included in Table 7. BTEX compounds were detected and are shown in Table 8. Table 9 provides data on additional VOCs detected that are not included in Table 7. Table 7, Table 8, and Table 9 also show the previous 3 quarter's data for comparison purposes. Figure 8 shows the TVOCs concentrations. Table 10 lists the metals concentrations.

No VOCs were detected in the 27 monitoring wells listed below:

PIN12-0508	PIN12-0517	PIN12-S56C	PIN12-S68B	PIN12-S72C
PIN12-0510	PIN12-0518	PIN12-S56D	PIN12-S69B	PIN12-S73B
PIN12-0511	PIN12-0522	PIN12-S57B	PIN12-S69C	PIN12-S73D
PIN12-0512	PIN12-S31B	PIN12-S59B	PIN12-S69D	
PIN12-0515	PIN12-S36B	PIN12-S59D	PIN12-S71B	
PIN12-0516	PIN12-S56B	PIN12-S60C	PIN12-S72B	

Samples from the 38 monitoring wells listed below contained VOCs at detectable levels. They are:

PIN12-0509	PIN12-0526	PIN12-S37B	PIN12-S60D	PIN12-S70D
PIN12-0513	PIN12- RW01	PIN12-S54D	PIN12-S67B	PIN12- S71C
PIN12-0514	PIN12- RW02	PIN12-S55B	PIN12-S67C	PIN12-S71D
PIN12-0520	PIN12-S29C	PIN12-S55C	PIN12-S67D	PIN12-S72D
PIN12-0521	PIN12-S30B	PIN12-S57C	PIN12-S68C	PIN12-S73C
PIN12-0523	PIN12-S32B	PIN12-S57D	PIN12-S68D	PIN12- TE03
PIN12-0524	PIN12-S33C	PIN12-S59C	PIN12-S70B	
PIN12-0525	PIN12-S35B	PIN12-S60B	PIN12-S70C	

TVOCs concentrations ranged from below detection limits to 148,100 µg/L in well PIN12−S35B. The compound detected at the highest concentration in PIN12−S35B was cis-1,2-DCE at a concentration of 100,000 µg/L.

Floridan aquifer wells PIN12-0527, -0528, and PIN15-0513 were not sampled for VOCs this quarter.

3.2.3 Wastewater Neutralization Area (PIN18)

No VOCs were detected in the two wells listed below. These were the only wells sampled for VOCs this quarter.

PIN18- RW02 PIN18- RW03

Arsenic samples were collected from 10 wells. Arsenic concentrations from quarterly sampling are listed in Table 11 and shown in Figure 9. Monthly sampling results for the new recovery wells PIN18- RW02 and -RW03 are shown in Table 11. The highest concentration of arsenic detected was 0.58 mg/L in PIN18-0501.

3.2.4 Perimeter (PIN21) and Other Monitoring Wells (PIN05, PIN06, PIN09, and PIN10)

Concentrations of VOCs and BTEX compounds measured in samples from perimeter and other monitoring wells are included in Table 7 and Table 8, respectively. Table 9 provides data on additional VOCs detected that are not included in Table 7. Table 7, Table 8, and Table 9 also show the previous 3 quarter's data for comparison purposes. Figure 8 shows the TVOCs concentrations for the PIN21 wells. Table 10 lists the metals concentrations.

No VOCs were detected in the six monitoring wells listed below:

PIN06-0500	PIN21-0502	PIN21-0504
PIN21-0500	PIN21-0503	PIN21-0505

Samples from the five monitoring wells listed below contained VOCs at detectable levels. They are:

PIN06-0501	PIN10-0500	PIN21-0512
PIN09-0500	PIN21-0501	

The sample from PIN06-0501 contained TVOCs at 4.9 µg/L. The compound detected at the highest concentration in PIN06-0501 was 1,4-dichlorobenzene at a concentration of 4.9 µg/L.

3.3 Quality Assurance/Quality Control

Stoller checked the analytical results from STL for quality assurance/quality control (QA/QC) through duplicate samples, trip blanks and equipment blanks. Detected analytes for VOCs, metals and arsenic analyses for each duplicate sample are listed in Table A-1 (Appendix A). The duplicate sample results were compared and the relative percent differences (RPDs) between the results were calculated. There were six duplicates analyzed for VOCs, three duplicates analyzed for RCRA metals and one duplicate analyzed for arsenic. A total of 247 duplicate analyses for individual analytes were performed. Only one of the individual analyses failed. Dichlorodifluoromethane in PIN12-S32B did not meet the guidance criterion that the RPDs results should be within the range of ±30 percent when the concentration is greater than 5 times the detection limit. The failure rate was less than 0.5 percent. All other data passed QA/QC criteria at a Class A level, indicating that all data may be used for quantitative and qualitative purposes.

Duplicate samples should be collected at a frequency of one duplicate for every twenty or fewer samples. There were 112 ground water samples analyzed for VOCs, with six duplicate VOC samples collected. There were 78 ground water samples analyzed for RCRA metals, with three duplicate samples. There were 10 ground water samples analyzed for arsenic, with one duplicate sample collected. The internal duplicate requirement for metals was not met for this sampling event. The duplicate requirements for VOCs and for arsenic were met.

During the quarterly sampling event, six trip blanks and one equipment blank were submitted for analysis. Three of the blanks continued to show an ongoing pattern of low-level methylene chloride detections, probably due to laboratory contamination, but the level of contamination was lower than that seen in the annual sampling event in April 2002. The highest methylene chloride concentration in the blank samples was 1.0 µg/L. All detected methylene chloride values were above the instrument detection limit but below the reporting limit.

4.0 Treatment System and Recovery Well Performance

4.1 Northeast Site and Building 100

The Northeast Site ground water treatment system was operational from July 1 through September 30, 2002. However, during this quarter, some system downtime was experienced. In July, the system experienced downtime over the last weekend of the month due to a failed sump pump. The pump was subsequently replaced. During August, the system experienced one overnight outage due to a loose float in the effluent tank. The float was re-secured the next morning. During September, an overnight outage was experienced due to a very heavy rainfall event that filled up the containment berm and caused a complete system shutdown.

Table 12 provides a summary of analytical results for samples collected at the Northeast Site Treatment System during this quarter. FeRemede® continues to be utilized to effectively control the deposition of iron and hardness salts. The application of sodium hypochlorite as a microbiocide has continued to successfully control biological growth in the air stripper tower.

From July 1 through September 30, 2002, 2,211,860 gallons of ground water were recovered from the Northeast Site and Building 100 recovery wells. The volume of recovered ground water treated by the Northeast Site Treatment System since its startup in June 1997 through September 2002 is presented in Chart 1. Charts 2, 3, and 4 present the monthly volume of ground water recovered during July through September 2002 from the Northeast Site recovery wells.

The monthly ground water recovery from July through September 2002 for the Building 100 recovery wells is presented in Charts 5, 6, and 7, respectively. The Building 100 recovery wells experienced the same downtime as the Northeast Site Ground Water Treatment System.

Total percent on-time for the Northeast Site air stripper tower (AST) is illustrated in Chart 8. On-time for the AST for this quarter was affected by the above-described minor outages. Historical summary of ground water at the Northeast Site and Building 100 is shown in Appendix D as Table D-1.

Table 13 presents the calculated mass of selected analytes recovered with the Northeast Site treatment system for each month of this reporting period. These monthly results are based on the measured system influent concentration and influent ground water flow.

4.2 Wastewater Neutralization Area

The two recovery wells (PIN18- RW02 and -RW03) continue to produce approximately 2.5 gallons per minute continuously with an electrical submersible pump set in each well at approximately 12 ft below land surface. The effluent ground water from each well is combined into a common header pipe and discharged into the industrial wastewater-receiving tank at the IWNF. During this quarter, 683,076 gallons of ground water were recovered from the IWNF. Since start-up on February 26, 2001, both wells have operated continuously.

5.0 Current and Project Work

5.1 Summary

Work for July through September 2002 included sampling of ground water monitoring wells and recovery wells for water quality, flow, and water levels. The treatment system and recovery wells were operated during the entire quarter, except for some short periods of downtime that were described in Section 4.1.

5.2 Project Work Conducted

The Northeast Site treatment system influent and effluent were sampled during the quarter. Treatment system effluent samples were analyzed for VOCs and the effluent discharge volume was recorded to comply with the Pinellas County wastewater permit. In the effluent samples, all volatile organic aromatic concentrations were under the Pinellas County regulatory limit of 50 µg/L.

Maintenance performed during the quarter consisted of routine preventative maintenance, a sump pump replacement, and an effluent tank float being re-secured.

6.0 Conclusions

The following conclusions are based on the quarterly sampling conducted in July 2002.

- No significant changes in the surficial ground water flow direction or relative potentiometric levels were observed for the prevailing pumping and seasonal recharge conditions.
- The highest concentration of VOCs was detected at the Northeast Site well PIN15- RW06.
- The operation of the Northeast Site recovery well appears to be controlling plume movement along the southern perimeter of the Northeast Site.

7.0 Tasks to Be Performed Next Quarter

The following tasks are expected to be conducted during the next quarterly period (October through December 2002):

- Quarterly sampling activities will occur in early October 2002.
- Monthly and mid-monthly sampling and analysis of ground water will continue in order to provide compliance and system operations data.
- Treatment system optimization will continue as new issues develop.
- Utilization of the dedicated bladder pumps for quarterly sampling using the micropurging technique will continue.

8.0 References

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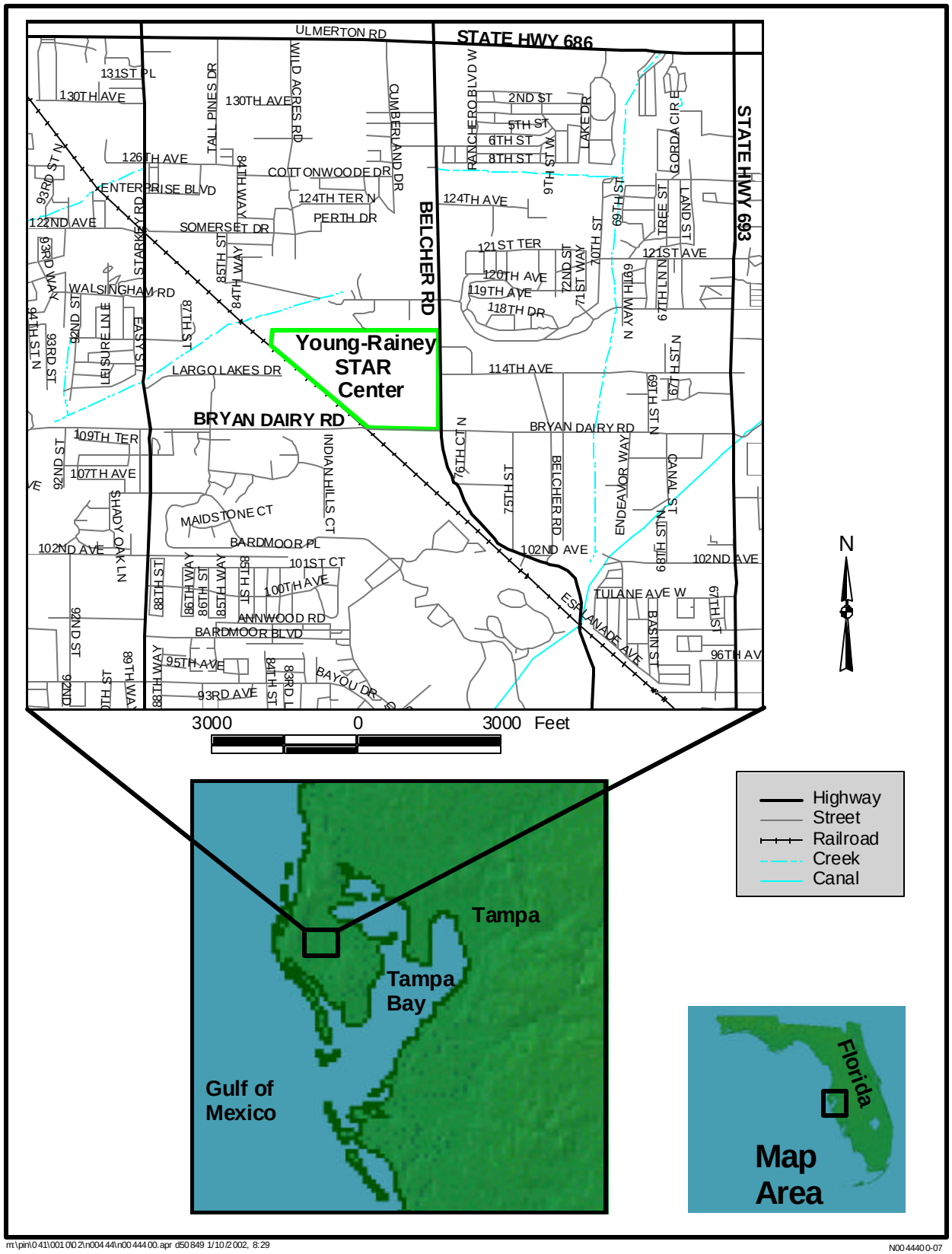

Figure 1. Young - Rainey STAR Center Location

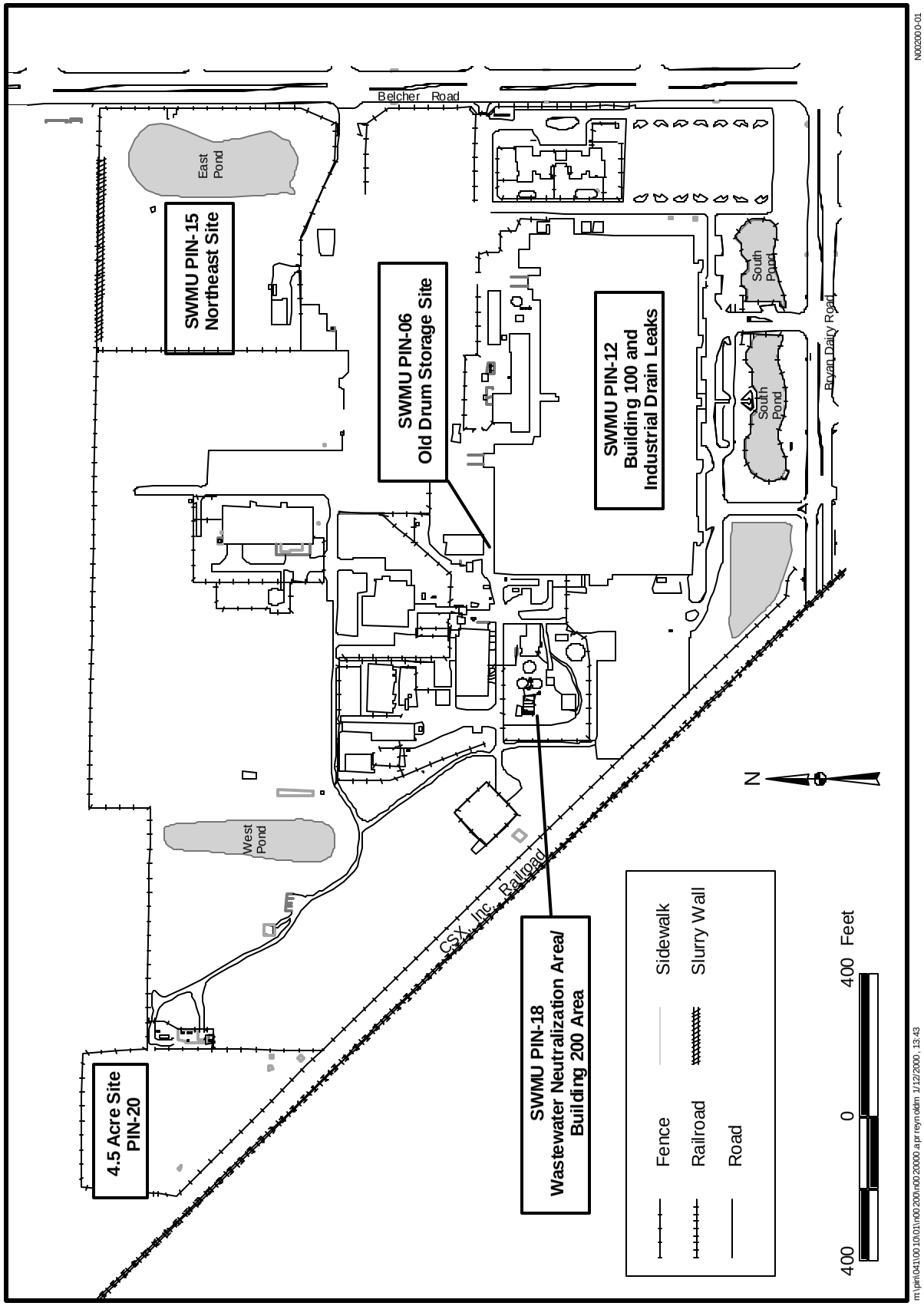

Figure 2. Location of STAR Center Solid Waste Management Units (SWMUs)

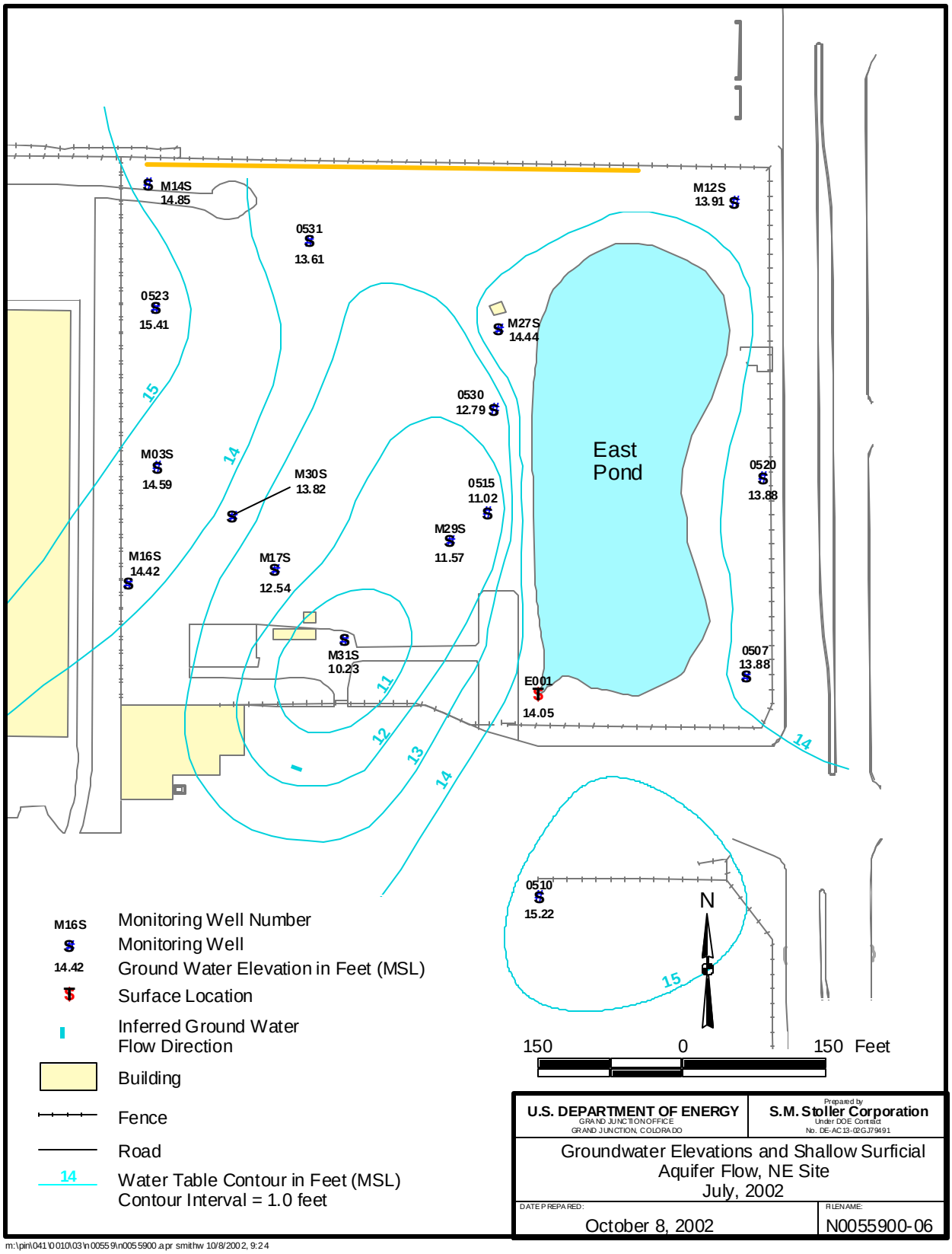

Figure 3. Ground Water Elevations and Shallow Surficial Aquifer Flow, Northeast Site, July 2002

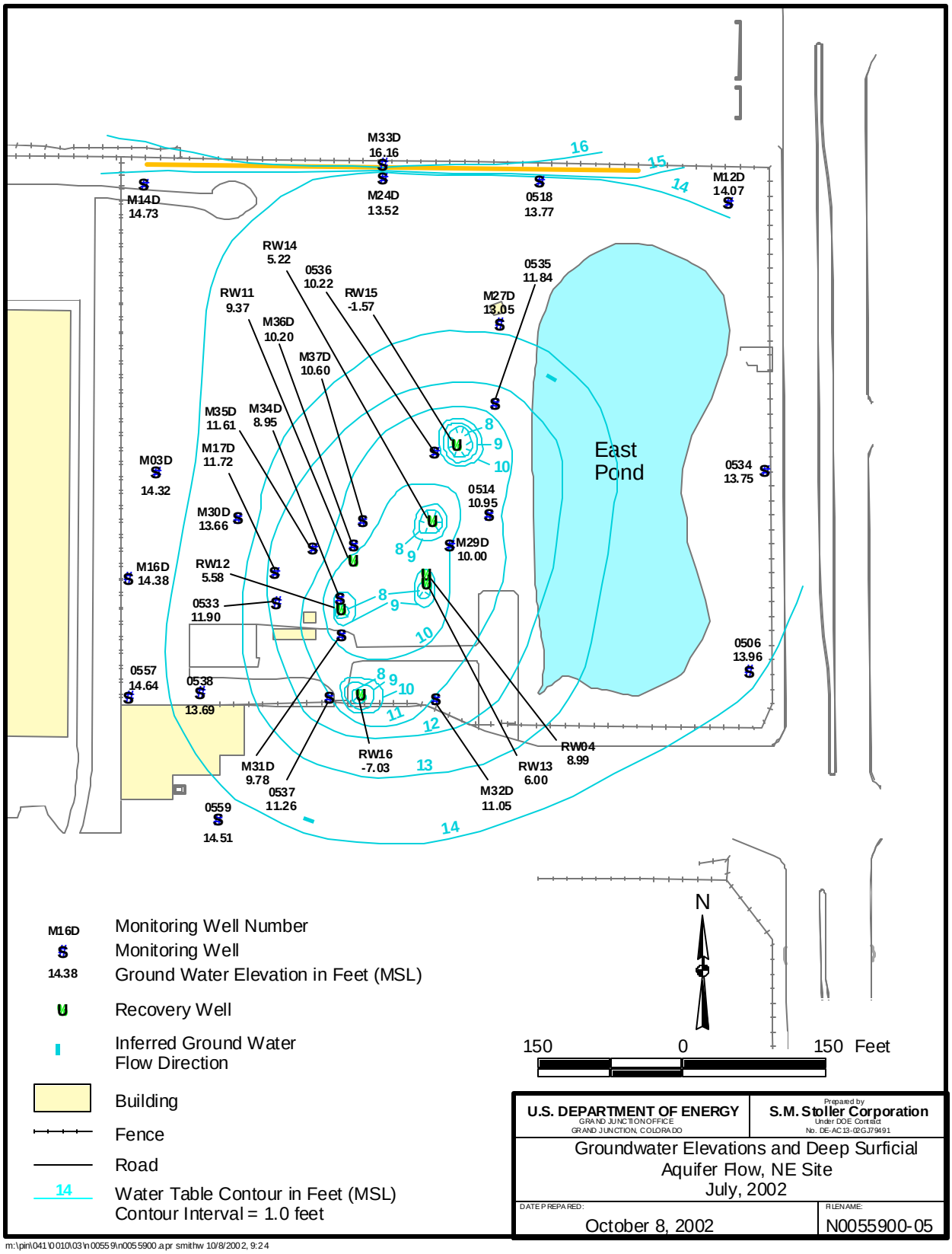

Figure 4. Ground Water Elevations and Deep Surficial Aquifer Flow, Northeast Site, July 2002

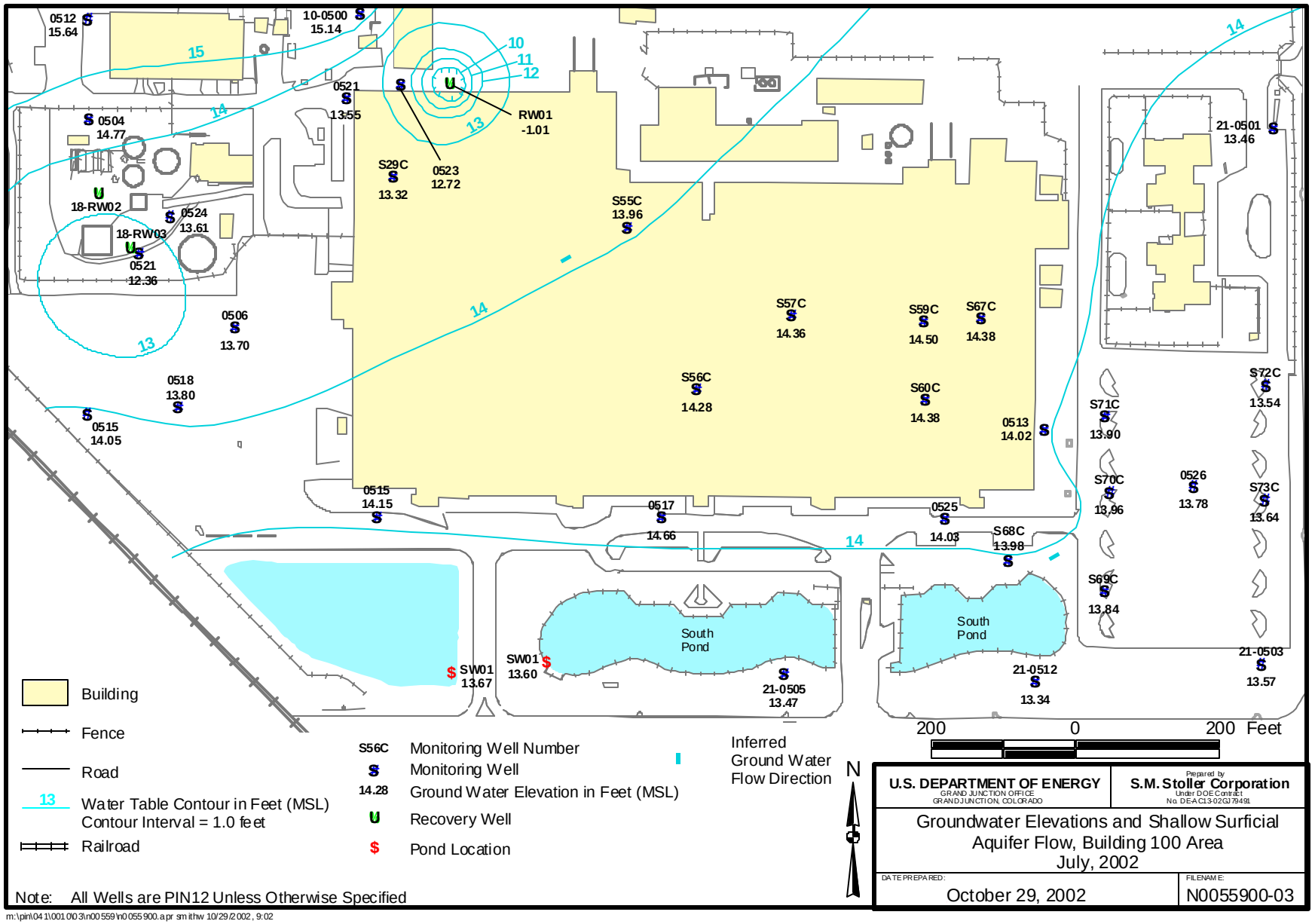

Figure 5. Ground Water Elevations and Shallow Surficial Aquifer Flow, Building 100 Area, July 2002

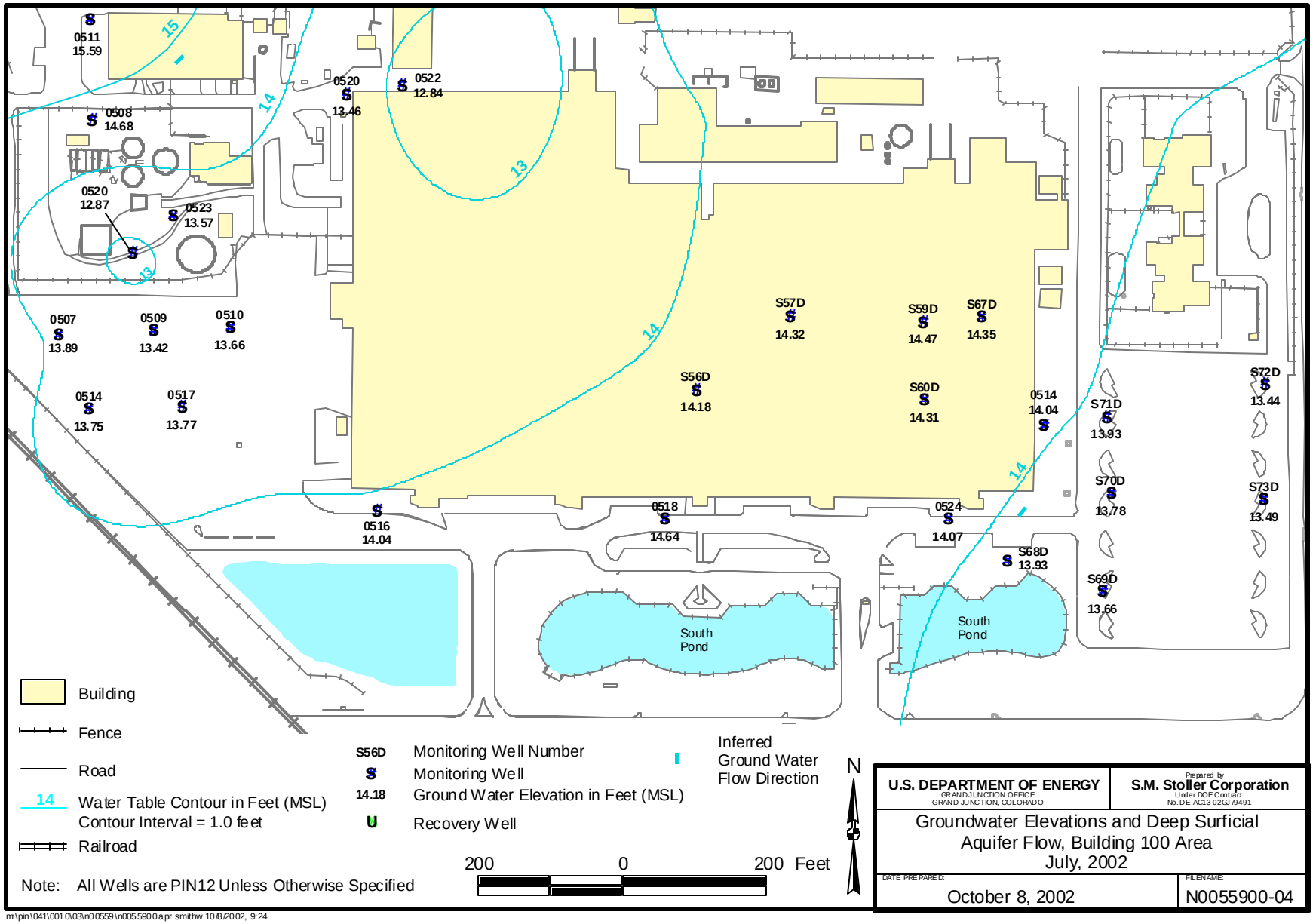

Figure 6. Ground Water Elevations and Deep Surficial Aquifer Flow, Building 100 Area, July 2002

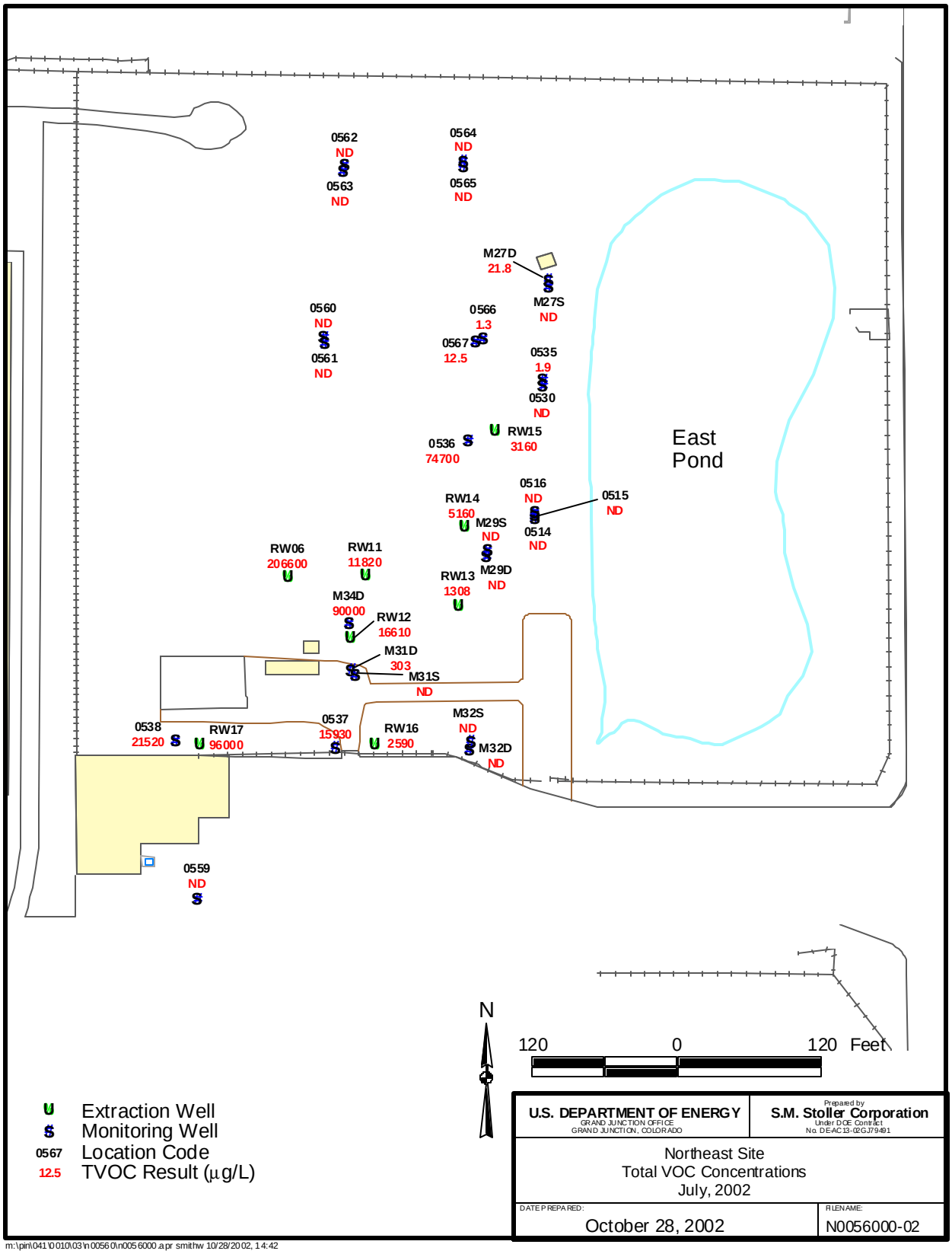

Figure 7. Total VOCs Concentrations at the Northeast Site, July 2002
(wells without VOC values or "NDs" were not sampled during this quarter)

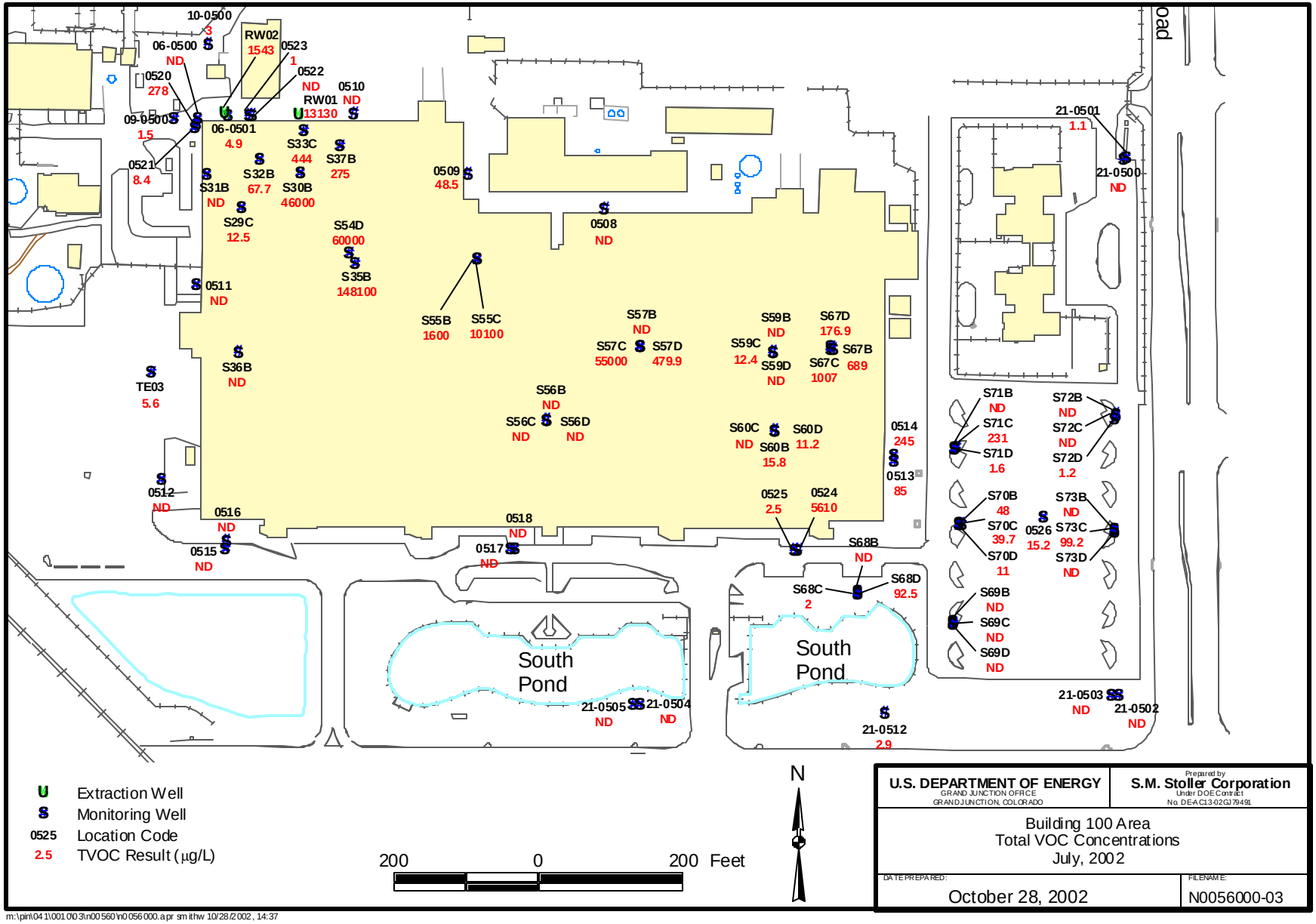

Figure 8. Total VOCs Concentrations at Building 100, July 2002

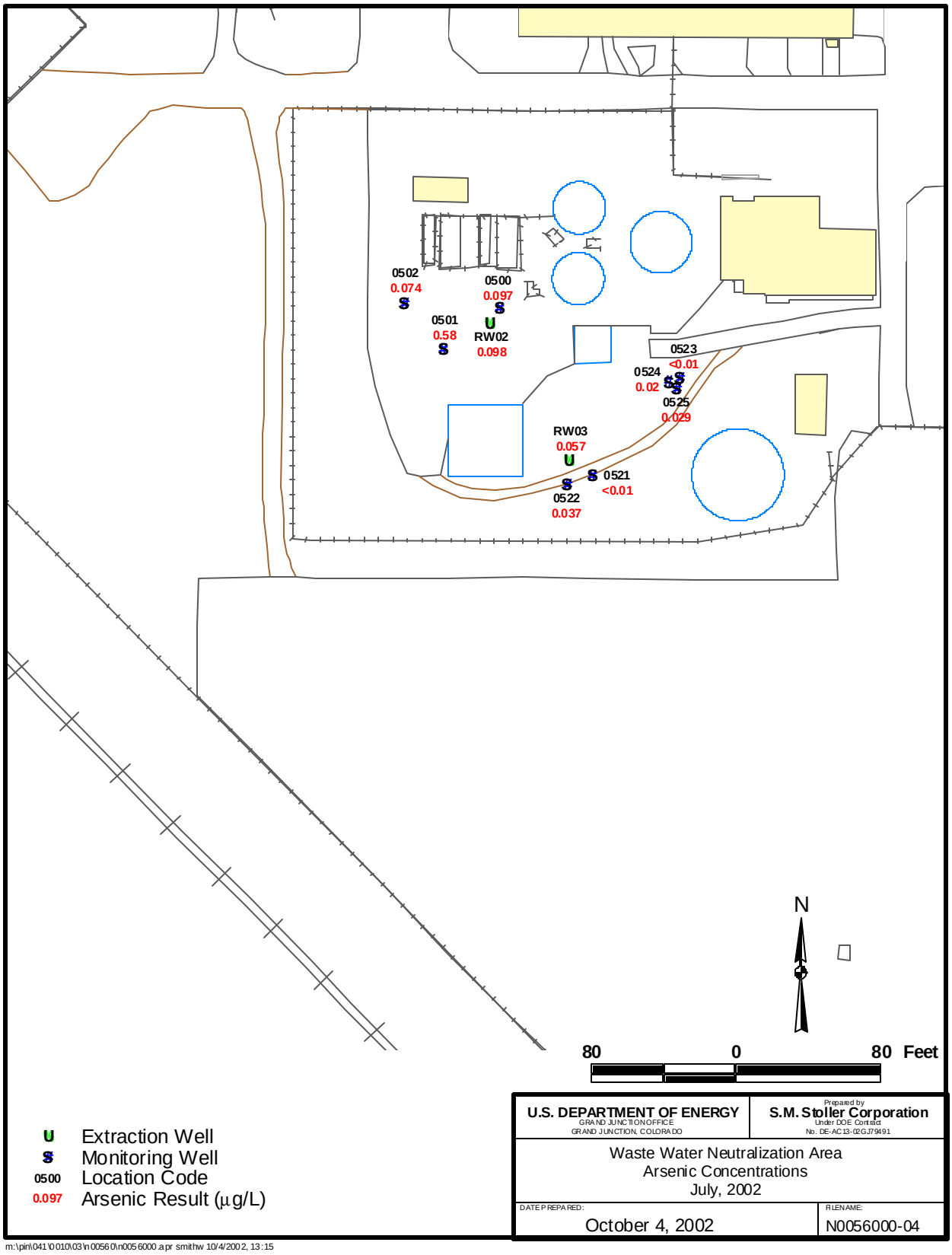

Figure 9. Arsenic Concentrations at the WWNA, July 2002

Table 1. WWNA Recovery Well Startup Monitoring Arsenic Concentrations (reported in milligrams per liter)

Sample Date	RW02	RW03	RW02/RW03 Combined Effluent
2/26/2001	0.08	0.1	0.095
2/27/2001	0.074	0.1	0.091
2/28/2001	0.074	0.091	0.074
3/1/2001	0.084	0.096	0.088
3/2/2001	0.088	0.095	0.089
3/5/2001	0.13	0.22	0.1
3/12/2001	0.37	0.11	0.13
3/19/2001	0.42	0.12	0.12
3/26/2001	0.15	0.16	0.8
4/2/2001	0.18	0.12	0.13
4/16/2001	0.18	0.17	0.13
5/1/2001	0.16	0.071	0.1
5/15/2001	0.14	0.15	0.093
5/30/2001	0.13	0.07	0.16
6/11/2001	0.11	0.068	0.083
6/26/2001	0.13	0.067	0.096
7/9/2001	0.14	0.054	0.087
7/23/2001	0.14	0.25	0.074
8/6/2001	0.11	0.2	0.18
8/21/2001	0.13	0.074	0.084
9/5/2001	0.13	0.054	0.091
10/8/2001	0.11	0.14	0.07
11/6/2001	0.095	0.053	0.076
12/7/2001	0.13	0.081	0.084
1/10/2002	0.11	0.081	0.076
2/5/2002	0.11	0.055	0.075
3/6/2002	0.12	0.05	0.076
4/2/2002	0.084	0.055	0.069
4/15/2002	-	0.049	-
4/16/2002	0.078	-	-
5/8/2002	0.11	0.048	0.071
6/4/2002	0.095	0.078	0.058
7/3/2002	0.16	0.056	0.074
7/15/2002	0.098	0.057	--
8/8/2002	0.0036J	0.11	0.065
9/10/2002	0.12	0.097	0.07

- = Not measured

J = Estimated value, result is between the reporting limit and the method detection limit.

Table 2. Water-Level Data at the STAR Center

Location	Measurement		Water Depth From Land Surface (ft)	Ground Water Elevation (ft NGVD)
	Date	Time		
PIN02	**West Pond**			
502D	7/9/2002	09:52	4.85	13.65
PIN06	**Old Drum Storage Site**			
0500	7/10/2002	09:37	3.8	14.2
0501	7/10/2002	09:22	4.46	13.84
PIN09	**Incinerator Site**			
0500	7/10/2002	09:29	3.74	14.23
PIN10	**Incinerator Ditch**			
0500	7/10/2002	09:43	2.76	15.14
PIN12	**Industrial Drain Leaks Building 100**			
0508	7/10/2002	09:07	3.78	14.58
0509	7/10/2002	13:00	4.15	13.89
0510	7/10/2002	09:14	4.84	13.22
0511	7/9/2002	16:21	4.17	13.63
0512	7/9/2002	16:26	2.94	13.87
0513	7/10/2002	10:59	4.48	14.02
0514	7/10/2002	10:58	4.46	14.04
0515	7/10/2002	10:35	3.75	14.15
0516	7/10/2002	10:33	3.96	14.04
0517	7/10/2002	08:35	3.24	14.66
0518	7/10/2002	08:38	3.3	14.64
0520	7/10/2002	09:31	4.55	13.46
0521	7/10/2002	09:25	4.5	13.55
0522	7/10/2002	09:20	5.36	12.84
0523	7/10/2002	09:21	5.44	12.72
0524	7/10/2002	09:25	3.34	14.07
0525	7/10/2002	09:28	3.39	14.03
0526	7/10/2002	11:18	3.04	13.78
0527	7/10/2002	08:40	11.23	6.84
0528	7/10/2002	10:27	10.77	6.83
RW01	7/10/2002	13:07	19.26	-1.01
S29C	7/10/2002	09:40	5.19	13.32
S30B	7/10/2002	09:54	5.37	13.14
S31B	7/10/2002	09:05	4.84	13.67
S32B	7/10/2002	09:12	5.28	13.23
S33C	7/10/2002	09:20	5.55	12.96
S35B	7/10/2002	10:07	5.17	13.34
S36B	7/10/2002	08:58	4.92	13.59
S37B	7/10/2002	09:30	5.29	13.22
S54D	7/10/2002	10:14	4.87	13.64
S55B	7/10/2002	10:50	4.58	13.93
S55C	7/10/2002	10:51	4.55	13.96
S56B	7/10/2002	10:29	4.23	14.28
S56C	7/10/2002	10:30	4.23	14.28
S56D	7/10/2002	10:31	4.33	14.18

Table 2 (continued). Water-Level Data at the STAR Center

Location	Measurement		Water Depth From Land Surface (ft)	Ground Water Elevation (ft NGVD)
	Date	Time		
S57B	7/10/2002	10:40	4.2	14.31
S57C	7/10/2002	10:41	4.15	14.36
S57D	7/10/2002	10:42	4.19	14.32
S59B	7/10/2002	08:34	4.09	14.42
S59C	7/10/2002	08:36	4.01	14.5
S59D	7/10/2002	08:38	4.04	14.47
S60B	7/10/2002	08:15	4.13	14.38
S60C	7/10/2002	08:18	4.13	14.38
S60D	7/10/2002	08:19	4.2	14.31
S67B	7/10/2002	11:17	4.07	14.4
S67C	7/10/2002	11:16	4.09	14.38
S67D	7/10/2002	11:23	4.13	14.35
S68B	7/10/2002	10:50	3.77	14.13
S68C	7/10/2002	10:50	3.92	13.98
S68D	7/10/2002	10:51	3.97	13.93
S69B	7/10/2002	11:12	2.22	13.78
S69C	7/10/2002	11:13	2.16	13.84
S69D	7/10/2002	11:14	2.34	13.66
S70B	7/10/2002	11:07	2.7	14
S70C	7/10/2002	11:08	2.74	13.96
S70D	7/10/2002	11:09	2.92	13.78
S71B	7/10/2002	11:04	4.66	13.74
S71C	7/10/2002	11:05	4.5	13.9
S71D	7/10/2002	11:05	4.47	13.93
S72B	7/10/2002	11:26	4.72	13.48
S72C	7/10/2002	11:27	4.66	13.54
S72D	7/10/2002	11:28	4.76	13.44
S73B	7/10/2002	11:21	3.15	13.85
S73C	7/10/2002	11:21	3.36	13.64
S73D	7/10/2002	11:22	3.51	13.49
TE03	7/9/2002	16:24	3.26	13.74
PIN15	**Northeast Site**			
0506	7/9/2002	14:30	3.04	13.96
0507	7/9/2002	14:30	3.12	13.88
0510	7/10/2002	10:15	2.3	15.22
0513	7/9/2002	14:27	10.62	6.98
0514	7/9/2002	14:13	6.55	10.95
0515	7/9/2002	14:13	6.48	11.02
0518	7/9/2002	14:23	4.03	13.77
0520	7/9/2002	14:29	3.32	13.88
0523	7/9/2002	15:24	2.59	15.41
0530	7/9/2002	14:19	4.61	12.79
0531	7/9/2002	15:38	3.99	13.61
0533	7/9/2002	14:49	6.1	11.9
0534	7/9/2002	14:28	3.55	13.75

Table 2 (continued). Water-Level Data at the STAR Center

Location	Measurement		Water Depth From Land Surface (ft)	Ground Water Elevation (ft NGVD)
	Date	Time		
0535	7/9/2002	14:19	5.76	11.84
0536	7/9/2002	14:17	7.38	10.22
0537	7/9/2002	14:00	7.34	11.26
0538	7/9/2002	14:56	5.11	13.69
0557	7/9/2002	14:55	4.46	14.64
0559	7/10/2002	10:06	4.28	14.51
0560	7/9/2002	15:29	5.12	12.88
0561	7/9/2002	15:29	5.15	12.85
0562	7/9/2002	15:37	4.22	13.58
0563	7/9/2002	15:37	4.36	13.44
0564	7/9/2002	15:33	3.76	13.44
0565	7/9/2002	15:33	3.41	13.79
0566	7/9/2002	15:31	5.11	12.39
0567	7/9/2002	15:31	4.58	12.92
E001	7/9/2002	14:34	1.97	14.05
M03D	7/9/2002	15:25	3.78	14.32
M03S	7/9/2002	15:25	3.51	14.59
M12D	7/9/2002	14:25	3.13	14.07
M12S	7/9/2002	14:25	3.59	13.91
M14D	7/9/2002	15:15	3.27	14.73
M14S	7/9/2002	15:15	3.15	14.85
M16D	7/9/2002	14:53	3.82	14.38
M16S	7/9/2002	14:53	3.78	14.42
M17D	7/9/2002	14:47	5.88	11.72
M17S	7/9/2002	14:47	4.96	12.54
M24D	7/9/2002	15:35	4.28	13.52
M27D	7/9/2002	14:21	4.55	13.05
M27S	7/9/2002	14:21	3.16	14.44
M29D	7/9/2002	14:09	7.6	10
M29S	7/9/2002	14:09	6.03	11.57
M30D	7/9/2002	14:51	4.24	13.66
M30S	7/9/2002	14:51	3.98	13.82
M31D	7/9/2002	14:37	8.22	9.78
M31S	7/9/2002	14:37	7.77	10.23
M32D	7/9/2002	14:04	6.75	11.05
M33D	7/9/2002	15:35	1.44	16.16
M34D	7/9/2002	14:38	9.15	8.95
M35D	7/9/2002	14:43	6.39	11.61
M36D	7/9/2002	14:41	7.6	10.2
M37D	7/9/2002	14:41	7.4	10.6
RW03	7/9/2002	14:42	6.99	10.91
RW04	7/9/2002	14:08	8.61	8.99
RW06	7/9/2002	14:45	35.99	-17.99
RW07	7/9/2002	14:11	8.89	8.71
RW10	7/9/2002	14:44	6.38	11.52

Table 2 (continued). Water-Level Data at the STAR Center

Location	Measurement		Water Depth From Land Surface (ft)	Ground Water Elevation (ft NGVD)
	Date	Time		
RW11	7/9/2002	14:39	8.63	9.37
RW12	7/9/2002	14:38	12.72	5.58
RW13	7/9/2002	14:05	11.6	6
RW14	7/9/2002	14:11	12.68	5.22
RW15	7/9/2002	14:17	18.77	-1.57
RW16	7/9/2002	14:02	25.03	-7.03
PIN18	**Wastewater Neutralization Area**			
0500	7/9/2002	10:43	7.75	12.35
0501	7/9/2002	10:35	6.8	13.2
0502	7/9/2002	10:40	6.13	13.87
0503	7/9/2002	16:44	3.86	13.82
0504	7/9/2002	10:45	4.83	14.77
0505	7/9/2002	15:56	4.42	13.46
0506	7/9/2002	16:14	4.01	13.7
0507	7/9/2002	16:44	3.84	13.89
0508	7/9/2002	10:48	4.82	14.68
0509	7/9/2002	16:00	4.41	13.42
0510	7/9/2002	16:11	4.1	13.66
0511	7/9/2002	10:07	3.21	15.59
0512	7/9/2002	10:09	2.96	15.64
0513	7/9/2002	10:08	3.06	15.74
0514	7/9/2002		4.03	13.75
0515	7/9/2002		4.36	14.05
0516	7/9/2002	16:32	4.52	13.89
0517	7/9/2002	16:29	4.48	13.77
0518	7/9/2002	16:29	4.4	13.8
0519	7/9/2002	16:29	4.54	13.74
0520	7/9/2002	10:24	5.13	12.87
0521	7/9/2002	10:25	5.74	12.36
0522	7/9/2002	10:26	5.71	12.39
0523	7/9/2002	10:15	5.83	13.57
0524	7/9/2002	10:16	5.39	13.61
0525	7/9/2002	10:17	5.55	13.35
0526	7/9/2002	10:00	3.5	15.1
RW02	7/9/2002	17:34	10.5	9.6
RW03	7/9/2002	17:33	10.51	7.79
PIN21	**Perimeter Monitoring Wells**			
0500	7/9/2002	17:07	4.57	13.53
0501	7/9/2002	17:06	4.54	13.46
0502	7/9/2002	17:00	2.11	13.09
0503	7/9/2002	16:58	1.63	13.57
0504	7/9/2002	16:42	4.16	13.44
0505	7/9/2002	16:40	3.93	13.47
0512	7/9/2002	16:48	3.96	13.34

Table 2 (continued). Water-Level Data at the STAR Center

Location	Measurement		Water Depth From Land Surface (ft)	Ground Water Elevation (ft NGVD)
	Date	Time		
PIN23	**Southwest Pond**			
SW01	7/9/2002	16:36		13.67
PIN37	**South Pond**			
S001	7/9/2002	16:34		13.6

Table 3. Floridan Aquifer Monitoring Well Water Elevations

Well Identification	Previous Water Level Elevation (ft, MSL)	Current Water Level Elevation (ft, MSL)
PIN15-0513	5.77	6.98
PIN12-0527	6.03	6.84
PIN12-0528	5.81	6.83

Table 4. Vertical Hydraulic Differential

Water Level Measured From	Well Identification	Water Level Elevation (ft, MSL)
Deep Surficial Aquifer	PIN15- M12D	14.07
Floridan Aquifer	PIN15-0513	6.98

Table 5. Surface Water Elevations

Pond Location	Previous Water Level Elevation (ft, MSL)	Current Water Level Elevation (ft, MSL)
East Pond	13.79	14.05
South Pond	13.36	9.64[a]
West Pond	15.25	NM
Southwest Pond	13.34	13.67

[a]Questionable reading
NM = not measured

Table 6. Field Measurements of Samples Collected at the STAR Center

Location	Temperature (°C)	Specific Conductance (µmhos/cm)[a]	Turbidity (NTU)	pH	Oxidation Reduction Potential (mV)	Dissolved Oxygen (mg/L)
PIN06	**Old Drum Storage Site**					
0500	30.83	769	2.19	6.63	-89	0.32
0501	29.09	1,054	5.16	6.52	90	0.38
PIN09	**Incinerator Site**					
0500	29.53	974	1.21	6.81	-101	0.26
PIN10	**Incinerator Ditch**					
0500	27.2	703	36.9	6.68	53	0.89
PIN12	**Industrial Drain Leaks Building 100**					
0508	27.57	657	1.52	6.43	118	0.22
0509	27.5	1,575	4.51	6.6	123	0.69
0510	29.87	912	3.52	6.64	-35	0.66
0511	28.31	300	3.35	6.42	110	3.78
0512	30.84	541	2.34	6.5	-52	0.8
0513	24.52	914	3.42	6.4	-36	1.62
0514	24.64	1,566	17	6.49	-43	1.55
0515	26.85	708	2.09	6.85	-121	0.19
0516	26.13	1,235	15.8	6.68	-104	0.58
0517	28.05	668	19.9	6.92	-53	0.73
0518	28.1	749	15	6.74	-36	1.19
0520	28.58	1,510	33.9	6.64	-7	0.25
0521	28.16	959	11	6.74	-90	0.26
0522	26.82	1,428	6.83	6.53	11.1	0.74
0523	26.96	917	14.8	6.61	-44	1.4
0524	26.86	1,369	13.8	6.6	-54	0.59
0525	27.36	742	9.32	6.78	-61	0.4
0526	30.9	2,102	12.9	6.54	-68.3	0.5
0527	27.02	1,537	1.92	6.96	-207	0.65
0528	24.88	1,207	1.67	6.68	-218	0.29
RW01	28.25	1,032	15.4	6.69	-52	0.65
RW02	27.12	842	0.94	6.7	-78	0.3
S29C	23.06	1,366	6.53	6.54	-68	0.34
S30B	23.08	1,450	2.39	6.56	-51	0.45
S31B	24.81	829	4.76	6.68	-76	0.39
S32B	22.8	1,128	3.92	6.61	-31	0.46
S33C	23.3	1,328	44.5	6.66	-99.1	0.24
S35B	22.16	1,600	17.5	6.54	-26	--
S36B	23.4	842	5.5	652	-53.1	0.29
S37B	22.45	1,146	15	6.67	-77	0.28
S54D	23.02	1,429	23.8	6.74	-87	--
S55B	23.75	544	170	6.43	-94	--
S55C	23.78	711	294	6.63	-173	--
S56B	22.86	1,480	729	6.83	-82	--
S56C	22.91	1,501	348	6.86	-95	--
S56D	22.94	1,582	91.1	6.9	-66	--

Table 6 (continued) Field Measurements of Samples Collected at the STAR Center

Location	Temperature (°C)	Specific Conductance (µmhos/cm)[a]	Turbidity (NTU)	pH	Oxidation Reduction Potential (mV)	Dissolved Oxygen (mg/L)
S57B	23.44	1,279	302	7.41	-139	--
S57C	23.24	1,017	323	6.84	-132	--
S57D	23.24	1,445	139	6.78	-76	--
S59B	21.89	841	330	8.68	-108	--
S59C	21.61	990	428	9.26	-160	--
S59D	22.91	1,438	5.67	6.73	-78	--
S60B	22.62	748	175	7.36	-36	--
S60C	22.56	775	97.7	8.09	-79	--
S60D	22.6	786	236	8.57	-106	--
S67B	22.99	1,301	25.2	6.66	-71	0.27
S67C	22.95	1,244	64.5	6.64	-63	0.3
S67D	22.94	1,467	170	6.64	-78	0.29
S68B	27.27	1,048	43.8	6.46	11.9	--
S68C	25.71	1,029	351	6.52	-77	--
S68D	27.54	1,383	37.8	6.59	-5	--
S69B	31.57	712	19.2	6.62	-52	0.77
S69C	30.75	1,021	466	6.72	-61	0.52
S69D	32.45	1,583	10.8	6.71	-53	1.31
S70B	30.28	1,738	13.5	6.6	-40	1.45
S70C	30.67	1,545	546	6.56	-41	0.91
S70D	31.08	1,507	39.3	6.55	-50	0.84
S71B	29.8	1,523	168	6.62	-101.8	0.39
S71C	29.6	1,639	>1,000	6.67	-118.1	0.39
S71D	29.4	1,505	16.7	6.64	-82.4	0.46
S72B	30.07	1,568	82.5	6.25	-11	1.45
S72C	30.22	719	14.3	6.69	-81	0.69
S72D	30.89	1,455	>1,000	6.42	-1	1.69
S73B	33.55	1,064	90.7	6.54	-42	1.23
S73C	32.39	1,507	257	6.54	-56	1.59
S73D	32.24	1,483	>1,000	6.63	-49	1.99
TE03	31.17	784	5.49	6.71	-61	0.48
PIN15	**Northeast Site**					
0514	24.75	1,597	2.09	6.6	6.5	0.31
0515	25.63	416	1.16	7.16	-162	0.23
0516	26.85	843	1.88	6.92	-3.9	2.88
0530	25.56	379	13.9	7.14	-155	0.44
0535	23.93	1,739	45.5	6.61	-72	0.7
0536	25.41	1,529	31.4	6.49	-51	0.47
0537	27.06	893	1.4	6.53	-45.6	0.48
0538	24.96	1,094	2.72	6.42	-151	0.51
0559	27.88	1,291	50.1	6.66	-66.3	0.95
0560	25.02	1,031	5.2	6.59	-29	0.56
0561	26.1	1,308	18.3	6.59	-48	0.15
0562	25.9	784	19.7	6.38	32	0.12

Table 6 (continued) Field Measurements of Samples Collected at the STAR Center

Location	Temperature (°C)	Specific Conductance (µmhos/cm)[a]	Turbidity (NTU)	pH	Oxidation Reduction Potential (mV)	Dissolved Oxygen (mg/L)
0563	29.33	2,689	>1,000	6.54	-32	0.33
0564	25.82	1,707	11.5	6.62	-21	0.26
0565	26.88	997	8.49	6.66	-43	0.27
0566	25.07	1,925	41.3	6.47	9	0.06
0567	26.43	861	17.8	6.76	-13	0.11
M27D	24.48	1,854	18.9	6.46	-63	0.85
M27S	27.63	877	1.04	6.83	6	0.67
M29D	25.48	258	2.31	5.98	-35.7	0.44
M29S	26.34	436	15.4	6.9	3.8	1.1
M31D	28.75	1,241	1.32	6.55	-46	1.26
M31S	27.53	841	2.62	6.42	-93	1
M32D	26.38	1,238	1.74	6.54	-33.4	0.55
M32S	27.26	1,230	16.7	6.65	18.3	0.42
M34D	26.6	1,537	5.18	6.11	-192	0.6
PIN18	**Wastewater Neutralization Area**					
0500	26.69	547	16.6	7.13	-131	0.22
0501	26.76	991	2.19	6.68	-129	0.27
0502	26.88	835	6.25	6.59	-55	0.31
0521	25.65	1,058	1.27	6.68	-69	0.26
0522	27.48	842	23.8	6.66	9	1.35
0523	26.43	1,182	40.8	6.62	-35	0.35
0524	26.36	679	3.87	6.73	-109	0.22
0525	28.12	494	8.19	6.43	86	2.01
RW02	28.52	664	5.69	6.76	-92	1.34
RW03	28.29	716	3.33	6.75	-85	0.58
PIN21	**Perimeter Monitoring Wells**					
0500	29.14	596	19.5	6.52	-34	0.48
0501	28.89	1,460	5.56	6.44	-34	0.77
0502	27.27	826	1.1	6.68	-42	0.43
0503	26.23	567	6.83	6.98	39	0.4
0504	26.09	847	6.22	6.73	-85	0.8
0505	24.96	1,027	7.25	6.63	-15	0.54
0512	24.45	973	14.6	661	-70	0.27

[a]Temperature corrected to 25°C
- = Not measured

Table 7. VOCs in Samples Collected at the STAR Center
(reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
PIN05		**Trench Site**								
0500	4/10/2002	<1	<1	<1	<1	<1	<1	<1	0.41J	ND
PIN06		**Old Drum Storage Site**								
0500	1/16/2002	0.17J	1.1	<1	<1	<1	0.18J	<1	0.64J	1.1[c]
0500	4/12/2002	0.13J	0.32J	<1	<1	<1	<1	0.84J	0.34J	ND[c]
0500	7/16/2002	<1	0.74J	<1	<1	<1	<1	<1	<5	ND[c]
0501	1/16/2002	<1	0.2J	<1	<1	<1	<1	<1	1.6J	10.5[c]
0501	4/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	11.4[c]
0501	7/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	4.9[c]
PIN09		**Incinerator Site**								
0500	1/15/2002	0.25J	0.24J	<1	<1	<1	<1	<1	0.59J	1.7[c]
0500	4/12/2002	<1	<1	<1	<1	<1	<1	2.8	<5	2.8
0500	7/16/2002	<1	<1	<1	<1	0.23J	<1	<1	<5	1.5[c]
PIN10		**Incinerator Ditch**								
0500	1/14/2002	0.8J	0.64J	<1	<1	<1	<1	<1	<5	ND
0500	4/12/2002	0.33J	0.61J	<1	<1	<1	<1	<1	<5	ND
0500	7/17/2002	0.33J	0.42J	<1	<1	<1	<1	<1	<5	3[b]
PIN12		**Industrial Drain Leaks Building 100**								
0508	1/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0508	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0508	7/17/2002	<1	0.67J	<1	<1	<1	<1	<1	<5	ND
0509	10/10/2001	<1	0.8J	<1	<1	<1	<1	<1	0.93J	11[c]
0509	1/16/2002	44	<1	<1	<1	<1	<1	<1	<5	44
0509	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	110[c]
0509	7/17/2002	<1	6	<1	<1	3.5	<1	<1	<5	48.5[c]
0510	10/10/2001	<1	1.1	<1	<1	3.2	<1	<1	4.3J	4.3
0510	1/16/2002	0.22J	0.17J	<1	<1	2	<1	<1	<5	2
0510	4/11/2002	<1	<1	<1	<1	<1	<1	<1	0.47J	ND
0510	7/17/2002	<1	<1	<1	<1	0.32J	<1	<1	<5	ND[c]
0511	1/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0511	4/15/2002	<1	<1	<1	<1	<1	<1	<1	0.55J	ND
0511	7/13/2002	<1	<1	<1	<1	<1	<1	<1	1.9JB	ND
0512	1/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0512	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0512	7/13/2002	<1	<1	<1	<1	<1	<1	<1	1.4JB	ND
0513	10/3/2001	0.18J	15	2.2	0.45J	24	22	<1	6.7	69.9
0513	1/9/2002	<1	19	1.9	0.47J	40	27	<1	<5	87.9
0513	4/11/2002	<1	31	2.1	0.58J	23	47	<1	<5	103.1
0513	7/13/2002	<1	16	2	0.39J	38	29	<1	0.68JB	85
0514	10/3/2001	<1	23	23	0.3J	33	6.2	<1	0.85J	85.2
0514	1/9/2002	<1	61	75	0.77J	120	17	<1	<5	273
0514	4/11/2002	<2.5	99	130	1.2J	97	38	<2.5	<12	364
0514	7/13/2002	<1	58	70	0.68J	100	17	<1	1.7JB	245
0515	10/7/2001	0.13J	<1	<1	<1	<1	<1	<1	1.3J	1.2[c]

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
0515	1/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
0515	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
0515	7/13/2002	<1	<1	<1	<1	<1	<1	<1	0.34JB	ND
0516	1/15/2002	<1	<1	<1	<1	3.1	<1	<1	<5	3.1
0516	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0516	7/13/2002	<1	<1	<1	<1	<1	<1	<1	1.8JB	ND
0517	1/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0517	4/13/2002	<1	<1	<1	<1	<1	<1	<1	0.63J	ND
0517	7/13/2002	<1	<1	<1	<1	<1	<1	<1	1.1JB	ND
0518	10/7/2001	<1	<1	<1	<1	1.6	<1	<1	1.3J	1.6
0518	1/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0518	4/13/2002	<1	<1	<1	<1	<1	<1	<1	0.62J	ND
0518	7/13/2002	<1	<1	<1	<1	0.56J	<1	<1	0.83JB	ND
0520	10/10/2001	<5	210	<5	0.62J	78	<5	<5	<25	288[b]
0520	1/16/2002	<5	270	<5	<5	110	<5	<5	5.1J	380[b]
0520	4/12/2002	<5	360	<5	1.2J	100	<5	<5	2.6J	460[c]
0520	7/16/2002	<2.5	200	<2.5	<2.5	78	<2.5	<2.5	<12	278[b]
0521	10/10/2001	<1	2.7	0.23J	<1	<1	0.15J	<1	0.48J	10.2[b,c]
0521	1/16/2002	1.4	1.5	<1	<1	<1	<1	<1	0.6J	10.1[b,c]
0521	4/12/2002	0.4J	0.82J	<1	<1	<1	<1	2.4	0.37J	2.4[c]
0521	7/16/2002	1.2	3.6	0.22J	<1	1.4	<1	<1	0.36J	8.4[b,c]
0522	10/10/2001	<1	<1	<1	<1	<1	<1	<1	0.96J	ND
0522	1/14/2002	0.79J	<1	<1	<1	<1	<1	<1	<5	ND
0522	4/12/2002	<1	<1	<1	<1	<1	<1	<1	0.51J	ND
0522	7/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0523	10/10/2001	0.55J	2.5	<1	<1	1.4	0.35J	<1	4.9J	3.9
0523	1/14/2002	0.55J	1.1	<1	<1	<1	<1	<1	0.48J	1.1
0523	4/12/2002	0.15J	1.1	<1	<1	0.49J	<1	<1	<5	1.1[c]
0523	7/17/2002	0.22J	1	<1	<1	0.42J	<1	<1	<5	1
0524	10/6/2001	<10	500	4.1J	3.8J	51	<10	<10	<50	551
0524	1/15/2002	<10	670	8.2	25	320	<10	<10	<50	1,023.2[c]
0524	4/13/2002	<10	1,800	110	430	490	<10	<10	<50	2,854[b,c]
0524	7/13/2002	<100	4,700	52J	230	680	<100	<100	78JB	5,610
0525	10/6/2001	<1	4.2	<1	<1	<1	<1	<1	<5	4.2
0525	1/15/2002	<1	2.5	<1	<1	<1	<1	<1	<5	2.5[c]
0525	4/13/2002	<1	2.2	<1	<1	<1	<1	<1	0.53J	2.2[c]
0525	7/13/2002	<1	2.5	<1	<1	0.25J	<1	<1	0.66JB	2.5
0526	10/3/2001	<1	5.8	3.4	<1	2.8	<1	<1	5.5	17.5
0526	1/16/2002	<1	13	7.9	<1	8.1	0.17J	<1	0.65J	29
0526	4/13/2002	<1	14	4.8	<1	3.4	<1	<1	<5	22.2[b]
0526	7/13/2002	<1	6.8	4.4	<1	4	<1	<1	2.6JB	15.2
0527	10/7/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0527	4/15/2002	<1	<1	<1	<1	<1	<1	<1	0.4J	ND
0528	10/6/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
0528	4/15/2002	<1	<1	<1	<1	<1	<1	<1	0.37J	ND

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
RW01	10/22/2001	5,900	4,000	<250	31J	510	<250	<250	<1,200	10,410
RW01	1/14/2002	9,600	5,200	27J	24J	1,100	<100	<100	<500	15,900[c]
RW01	4/11/2002	9,000	7,200	<250	<250	400	<250	<250	<1,200	16,600
RW01	7/15/2002	8,100	4,100	40J	38J	930	<250	<250	<1,200	13,130
RW02	10/10/2001	780	640	65	15J	<25	<25	<25	18J	1,485
RW02	1/14/2002	890	800	50	7.8J	97	<25	<25	<120	1,837
RW02	4/11/2002	750	840	55	18	67	<10	<10	6.7J	1,730
RW02	7/15/2002	820	600	57	18J	66	<25	<25	9.4J	1,543
S29C	1/11/2002	<1	1.1	7.7	<1	120	4.1	<1	2.1J	132.9[b]
S29C	4/16/2002	<2.5	0.32J	3.6	<2.5	100	1.2J	1.5J	<12	103.6[b,c]
S29C	7/12/2002	<1	<1	3.9	<1	6.9	1.7	<1	<5	12.5
S30B	1/11/2002	11,000	9,400	240J	<250	<250	<250	<250	<1,200	20,400
S30B	4/16/2002	3,800	10,000	150J	<250	<250	<250	<250	<1,200	13,800
S30B	7/12/2002	23,000	22,000	1,000	<250	<250	<250	<250	130J	46,000
S31B	1/11/2002	1.1	1.3	<1	<1	<1	<1	<1	2.6J	2.4[c]
S31B	4/16/2002	0.27J	0.85J	<1	<1	<1	<1	<1	<5	ND
S31B	7/12/2002	<1	0.83J	<1	<1	<1	<1	<1	<5	ND[b]
S32B	1/11/2002	0.36J	16	2.2	4	9.8	16	<1	1.6J	62[c]
S32B	4/16/2002	<1	18	1	2.6	5	10	<1	<5	79.6[b,c]
S32B	7/12/2002	<1	15	1.8	5.2	7.7	22	<1	<5	67.7[c]
S33C	1/11/2002	7.5J	340	22	8.5J	580	58	<10	30J	1,000[b]
S33C	4/16/2002	1.8J	230	6.6	3.5J	520	32	<5	<25	812.8[b,c]
S33C	7/13/2002	<10	110	2.3J	<10	280	33	<10	7.7J	444[c]
S35B	1/11/2002	44,000	76,000	9,500	320J	19,000	<1,000	<1,000	<5,000	148,500
S35B	4/15/2002	47,000	110,000	7,800	<2,500	11,000	<2,500	<2,500	<12,000	175,800[c]
S35B	7/12/2002	36,000	100,000	5,500	<2,500	6,600	<2,500	<2,500	<12,000	148,100
S36B	1/11/2002	<1	<1	<1	<1	<1	<1	<1	1.6J	ND
S36B	4/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S36B	7/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S37B	1/11/2002	0.43J	53	1.2	<1	46	0.47J	8.8	1.2J	109[b]
S37B	4/16/2002	<5	220	1.2J	<5	160	<5	<5	<25	386.4[c]
S37B	7/12/2002	<10	230	<10	<10	45	<10	<10	<50	275
S54D	1/12/2002	15,000	42,000	250J	420J	<500	<500	<500	<2,500	57,000
S54D	4/15/2002	9,900	43,000	<1,000	<1,000	<1,000	<1,000	<1,000	<5,000	52,900[b]
S54D	7/12/2002	15,000	43,000	77J	190J	2,000	<500	<500	<2,500	60,000
S55B	1/12/2002	<50	820	<50	<50	5,100	<50	<50	<250	5,920[b]
S55B	4/15/2002	<100	1,800	<100	<100	11,000	<100	<100	<500	12,800[b]
S55B	7/11/2002	<250	1,800	<250	<250	8,300	<250	<250	<1,200	10,100
S55C	1/12/2002	<100	6,600	53J	<100	2,600	<100	<100	<500	9,200[c]
S55C	4/15/2002	<100	9,400	16J	<100	3,000	<100	<100	<500	12,400
S55C	7/11/2002	<100	1,600	<100	<100	53J	<100	<100	<500	1,600
S56B	1/12/2002	<1	<1	<1	<1	<1	<1	<1	1.3J	ND
S56B	4/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S56B	7/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S56C	1/12/2002	<1	<1	<1	<1	<1	<1	<1	1.2J	ND

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
S56C	4/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S56C	7/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S56D	1/12/2002	1.3	5.2	0.25J	<1	1.4	<1	<1	1.1J	7.9
S56D	4/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
S56D	7/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S57B	1/12/2002	27	23	<1	1.6	10	<1	<1	1J	61.6
S57B	4/15/2002	<1	<1	<1	<1	<1	<1	<1	0.65J	ND
S57B	7/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S57C	1/12/2002	850J	26,000	460J	1,300	41,000	<1,000	<1,000	660J	68,300
S57C	4/15/2002	21,000	23,000	<1,000	370J	16,000	<1,000	<1,000	530J	60,000
S57C	7/11/2002	31,000	24,000	<1,000	670J	<1,000	<1,000	<1,000	<5,000	55,000
S57D	1/12/2002	3J	100	1.6J	5.8	160	<5	<5	5.2J	265.8
S57D	4/15/2002	7.6	240	1.1J	3.5J	580	<5	<5	<25	827.6[b]
S57D	7/11/2002	5.4	190	0.82J	4.5	280	<2.5	<2.5	0.78J	479.9
S59B	1/10/2002	<1	0.44J	<1	<1	<1	1.1	<1	<5	1.1
S59B	4/12/2002	<1	0.5J	<1	<1	3.7	0.99J	<1	<5	3.7
S59B	7/11/2002	<1	0.45J	<1	<1	<1	0.94J	<1	<5	ND
S59C	1/10/2002	<1	7.4	<1	<1	12	<1	<1	<5	22.2[c]
S59C	4/12/2002	<1	5.8	<1	<1	5.4	<1	<1	<5	12.3[b,c]
S59C	7/11/2002	<1	9.3	<1	<1	1.2	<1	1.9	<5	12.4
S59D	1/10/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S59D	4/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S59D	7/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S60B	1/10/2002	<1	3.4	<1	0.54J	<1	6.4	0.24J	<5	9.8[b]
S60B	4/12/2002	<1	5.9	<1	0.63J	<1	7	<1	<5	12.9[b]
S60B	7/11/2002	<1	5.8	<1	0.65J	0.56J	10	<1	<5	15.8
S60C	1/10/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
S60C	4/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
S60C	7/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S60D	1/10/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S60D	4/12/2002	<1	<1	<1	<1	<1	<1	<1	0.43J	ND
S60D	7/11/2002	<1	3.8	<1	0.23J	<1	7.4	<1	<5	11.2
S67B	1/10/2002	<10	51	6.1J	0.34J	470	94	<10	17J	636[c]
S67B	4/12/2002	<10	41	1.9J	<10	550	110	<10	<50	701
S67B	7/15/2002	<10	49	5.5J	<10	540	100	<10	<50	689
S67C	1/10/2002	<10	270	47	<10	550	62	<10	18J	929
S67C	4/12/2002	<10	440	64	1.4J	240	23	<10	<50	767
S67C	7/15/2002	<10	600	110	5.5J	280	17	<10	<50	1,007
S67D	1/10/2002	0.13J	110	27	1.4	57	4.6	<1	1.8J	200
S67D	4/12/2002	<2.5	100	<2.5	<2.5	69	<2.5	<2.5	<12	169
S67D	7/15/2002	0.26J	69	28	0.82J	75	4.9	<2.5	<12	176.9
S68B	4/11/2002	<1	<1	<1	<1	<1	<1	<1	0.4J	ND
S68B	7/16/2002	<1	0.12J	<1	<1	<1	<1	<1	<5	ND
S68C	4/11/2002	<1	1.6	<1	<1	1.7	<1	<1	<5	3.3
S68C	7/16/2002	<1	1	<1	<1	1	0.32J	<1	<5	2

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
S68D	4/11/2002	<1	50	<1	<1	62	<1	14	0.34J	126
S68D	7/16/2002	<1	49	0.27J	<1	42	1.5	<1	<5	92.5
S69B	4/10/2002	<1	<1	<1	<1	<1	<1	<1	0.49J	ND
S69B	7/14/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S69C	4/10/2002	<1	1.1	<1	<1	<1	<1	<1	0.42J	1.1
S69C	7/14/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S69D	4/10/2002	<1	<1	<1	<1	<1	<1	<1	0.87J	ND
S69D	7/14/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
S70B	4/10/2002	<1	30	0.36J	<1	16	<1	<1	0.31J	46
S70B	7/14/2002	<1	28	0.3J	<1	20	<1	<1	<5	48[b]
S70C	4/10/2002	<1	26	5.4	<1	6	6.1	<1	<5	43.5
S70C	7/14/2002	<1	22	6.4	<1	6.1	5.2	<1	<5	39.7[b]
S70D	4/10/2002	<1	7	1.2	<1	1.2	0.48J	<1	0.88J	9.4
S70D	7/14/2002	<1	7.8	2.1	<1	1.1	0.58J	<1	<5	11
S71B	4/11/2002	<1	<1	<1	<1	<1	<1	<1	0.64J	ND
S71B	7/13/2002	<1	0.5J	<1	<1	<1	<1	<1	<5	ND
S71C	4/11/2002	<1	55	17	0.45J	28	2.9	<1	1.1J	102.9
S71C	7/13/2002	<1	120	69	0.23J	42	<1	<1	<5	231
S71D	4/11/2002	<1	0.93J	<1	<1	<1	<1	<1	0.5J	ND
S71D	7/13/2002	<1	1.6	<1	<1	<1	<1	<1	<5	1.6
S72B	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S72B	7/15/2002	<1	<1	<1	<1	<1	<1	<1	0.38J	ND
S72C	4/10/2002	<1	<1	<1	<1	<1	0.71J	<1	0.47J	ND
S72C	7/15/2002	<1	0.15J	<1	<1	<1	0.76J	<1	<5	ND
S72D	4/10/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S72D	7/15/2002	<1	<1	<1	<1	<1	<1	<1	0.37J	1.2[c]
S73B	4/10/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S73B	7/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
S73C	4/10/2002	<1	46	18	<1	29	4.2	<1	0.77J	97.2
S73C	7/15/2002	<1	43	18	0.83J	34	4.2	<1	0.4J	99.2
S73D	4/10/2002	<1	<1	<1	<1	<1	<1	<1	0.86J	ND
S73D	7/15/2002	<1	0.6J	0.15J	<1	0.24J	<1	<1	0.42J	ND
TE03	10/6/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
TE03	1/16/2002	<1	<1	<1	<1	<1	<1	<1	0.87J	ND
TE03	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
TE03	7/13/2002	<1	0.14J	<1	<1	5.6	<1	<1	1.2JB	5.6
PIN15		**Northeast Site**								
0506	10/3/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND[c]
0506	4/17/2002	<1	0.14J	<1	<1	<1	0.29J	<1	<5	ND
0507	10/3/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0507	4/17/2002	<1	0.15J	<1	<1	0.24J	0.36J	<1	0.37J	ND
0510	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[c]
0513	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0514	10/5/2001	<1	<1	<1	<1	<1	<1	<1	<5	1[b]
0514	1/8/2002	<1	<1	<1	<1	3	0.17J	<1	0.32J	13.8[b]

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
0514	4/17/2002	<1	<1	<1	<1	<1	<1	<1	1.4J	ND
0514	7/12/2002	<1	<1	<1	<1	<1	<1	<1	0.47JB	ND
0515	10/5/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0515	1/8/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0515	4/17/2002	<1	<1	<1	<1	<1	<1	<1	1J	ND
0515	7/12/2002	<1	<1	<1	<1	<1	<1	<1	0.34JB	ND
0516	10/5/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0516	1/8/2002	<1	<1	<1	<1	<1	<1	<1	1.3J	ND
0516	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0516	7/12/2002	<1	<1	<1	<1	<1	<1	<1	0.35JB	ND
0518	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0520	10/3/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0520	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0523	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0530	10/5/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0530	1/8/2002	<1	<1	<1	<1	<1	<1	<1	1.5J	ND
0530	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0530	7/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0531	4/19/2002	<1	<1	<1	<1	<1	<1	<1	0.76J	ND
0533	4/19/2002	7,800	16,000	<250	67J	560	<250	<250	140J	24,360
0534	10/3/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0534	4/17/2002	<1	0.19J	<1	<1	<1	<1	<1	<5	ND
0535	10/5/2001	<1	<1	<1	<1	<1	<1	<1	<5	1.2[b]
0535	1/8/2002	0.13J	0.73J	<1	<1	<1	<1	<1	<5	2.5[b]
0535	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	2[b]
0535	7/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	1.9[b]
0536	10/9/2001	120,000	54,000	<2,500	<2,500	<2,500	<2,500	<2,500	<12,000	174,000
0536	1/9/2002	110,000	32,000	<2,500	<2,500	1,800J	<2,500	<2,500	<12,000	142,000
0536	4/19/2002	110,000	15,000	920J	<1,000	560J	<1,000	<1,000	<5,000	125,000
0536	7/12/2002	69,000	5,700	740J	<2,500	<2,500	<2,500	<2,500	1,600JB	74,700
0537	10/5/2001	<250	11,000	<250	<250	<250	<250	<250	<1,200	11,000[b]
0537	1/10/2002	29J	7,800	67J	<250	2,100	<250	<250	<250	9,900[b]
0537	4/18/2002	21J	3,600	<50	<50	1,800	<50	<50	16J	5,400
0537	7/11/2002	<100	11,000	32J	<100	4,800	<100	<100	<500	15,930[b]
0538	1/10/2002	<500	11,000	58J	<500	40,000	<500	<500	<2,500	53,000[b]
0538	4/18/2002	<250	2,500	<250	<250	24,000	<250	<250	<1,200	27,050[b]
0538	7/12/2002	<250	970	<250	<250	20,000	<250	<250	<1,200	21,520[b]
0557	10/5/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND[c]
0557	4/18/2002	<1	<1	<1	<1	3	<1	2.1	<5	5.1
0558	10/4/2001	<250	<250	<250	<250	27,000	<250	<250	<1,200	27,000
0558	1/10/2002	<50	<50	<50	<50	4,600	<50	<50	<250	4,600[b]
0558	4/16/2002	<250	<250	<250	<250	1,500	<250	<250	340J	1,500
0559	10/4/2001	<1	<1	<1	<1	<1	<1	<1	4.5J	ND[b]
0559	1/14/2002	1.4	0.55J	<1	<1	<1	<1	<1	1.3J	1.4[b]
0559	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
0559	7/11/2002	<1	0.5J	<1	<1	<1	<1	<1	<5	ND[b]
0560	10/10/2001	<1	0.24J	<1	<1	<1	<1	<1	1.8J	ND
0560	1/11/2002	<1	<1	<1	<1	<1	<1	<1	3.1J	2.5[c]
0560	4/19/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0560	7/16/2002	<1	<1	<1	<1	<1	<1	<1	0.32J	ND
0561	10/10/2001	<1	<1	<1	<1	<1	<1	<1	1.8J	ND
0561	1/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0561	4/19/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0561	7/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0562	10/11/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
0562	1/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[c]
0562	4/18/2002	<1	<1	<1	<1	<1	<1	1.2	<5	3.6[c]
0562	7/16/2002	<1	<1	<1	<1	0.84J	<1	<1	<5	ND
0563	10/11/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND[b,c]
0563	1/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0563	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0563	7/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0564	10/10/2001	<1	<1	<1	<1	<1	<1	<1	1.1J	ND[b]
0564	1/11/2002	<1	<1	<1	<1	<1	<1	<1	4.4J	ND[b]
0564	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0564	7/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
0565	10/10/2001	<1	<1	<1	<1	<1	<1	<1	2.4J	ND[b]
0565	1/11/2002	6.9	5.1	<1	<1	3.6	<1	<1	3.5J	15.6[b]
0565	4/18/2002	<1	<1	<1	<1	<1	<1	<1	0.44J	ND
0565	7/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0566	10/10/2001	<1	<1	<1	<1	<1	<1	<1	5.2	8.6[b]
0566	1/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	4.8[b]
0566	4/19/2002	<1	<1	<1	<1	<1	<1	<1	<5	8.8[b]
0566	7/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	1.3[b]
0567	10/10/2001	2.9	9.6	2.8	0.13J	1.6	<1	<1	1.1J	16.9[b]
0567	1/11/2002	0.42J	28	9.7	0.26J	5	<1	<1	<5	42.7[b]
0567	4/19/2002	0.24J	16	5.7	0.15J	2.5	<1	<1	<5	24.2
0567	7/16/2002	<1	8.4	2.8	<1	1.3	<1	<1	0.33J	12.5[b]
M03D	10/4/2001	<1	<1	<1	<1	<1	<1	<1	<5	2.2[b]
M03D	4/18/2002	<1	<1	<1	<1	0.61J	<1	<1	<5	ND
M03S	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
M12D	10/4/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
M12D	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
M12S	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
M14D	10/4/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
M14D	4/17/2002	<1	<1	<1	<1	0.91J	<1	<1	<5	ND
M14S	4/17/2002	<1	<1	<1	<1	<1	<1	0.49J	<5	2[c]
M16D	10/4/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
M16D	4/18/2002	<1	<1	<1	<1	<1	<1	0.26J	<5	4.8[c]
M16S	10/4/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
M16S	4/18/2002	<1	<1	<1	<1	<1	<1	1.1	<5	3.2[c]
M17D	4/18/2002	21,000	140,000	<2,500	<2,500	3,800	<2,500	<2,500	65,000	291,800[b]
M17S	4/18/2002	10	7.1	<1	<1	0.61J	<1	<1	1.2J	45.1[b]
M24D	4/18/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
M27D	10/8/2001	<1	<1	<1	<1	<1	<1	<1	0.59J	20.2[b]
M27D	1/8/2002	<1	<1	<1	<1	<1	<1	<1	1.3J	11.2[b]
M27D	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	25.2[b]
M27D	7/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	21.8[b]
M27S	10/8/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
M27S	1/8/2002	<1	<1	<1	<1	<1	<1	<1	0.48J	ND
M27S	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
M27S	7/12/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
M29D	10/6/2001	<1	<1	<1	<1	<1	<1	<1	0.55J	ND
M29D	1/9/2002	<1	<1	<1	<1	<1	<1	<1	<5	1[b,c]
M29D	4/17/2002	<1	<1	<1	<1	<1	<1	<1	0.9J	ND[b]
M29D	7/12/2002	<1	<1	<1	<1	<1	<1	<1	0.37JB	ND
M29S	10/6/2001	<1	<1	<1	<1	<1	<1	<1	0.56J	ND
M29S	1/9/2002	<1	<1	<1	<1	<1	<1	<1	0.39J	ND
M29S	4/17/2002	<1	<1	<1	<1	<1	<1	<1	1.3J	ND
M29S	7/12/2002	<1	<1	<1	<1	<1	<1	<1	0.39JB	ND
M30D	4/18/2002	<1	<1	<1	<1	2.2	<1	<1	0.87J	5.3[c]
M30S	4/18/2002	<2.5	3.8	<2.5	<2.5	41	<2.5	<2.5	<12	44.8
M31D	10/5/2001	<2.5	190	<2.5	<2.5	180	<2.5	<2.5	<12	370[b]
M31D	1/10/2002	<50	3,400	<50	<50	3,200	<50	<50	63J	6,600[b]
M31D	4/19/2002	<5	180	<5	<5	520	<5	<5	<25	711[b]
M31D	7/12/2002	<5	10	<5	<5	280	<5	<5	<25	303[b]
M31S	10/5/2001	21	10	<1	<1	65	<1	<1	<5	98[b]
M31S	1/10/2002	<1	0.75J	<1	<1	25	<1	<1	<5	28[b]
M31S	4/19/2002	<1	0.32J	<1	<1	8.7	<1	<1	<5	11.9[b]
M31S	7/12/2002	<1	<1	<1	<1	<1	<1	<1	0.64JB	ND
M32D	10/4/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
M32D	1/8/2002	<1	<1	<1	<1	<1	<1	<1	0.67J	ND[b]
M32D	4/17/2002	<1	<1	2.2	<1	<1	0.13J	<1	<5	7.7[b,c]
M32D	7/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
M32S	10/4/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
M32S	1/8/2002	0.35J	2	<1	<1	0.55J	<1	<1	<5	2
M32S	4/17/2002	<1	<1	<1	<1	<1	<1	<1	1.2J	ND
M32S	7/11/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
M33D	10/5/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
M33D	4/18/2002	<1	<1	<1	<1	<1	0.14J	<1	0.35J	ND
M34D	10/8/2001	<250	65J	<250	<250	5,800	<250	<250	<1,200	5,800[b]
M34D	1/10/2002	<250	9,700	68J	<250	15,000	<250	<250	<1,200	24,700[b]
M34D	4/19/2002	<500	15,000	<500	<500	14,000	<500	<500	1,000J	32,400[b]
M34D	7/12/2002	<2,500	39,000	<2,500	<2,500	21,000	<2,500	<2,500	930JB	90,000[b]
M35D	4/19/2002	440,000	310,000	<100,000	<100,000	<100,000	<100,000	<100,000	9,000,000	9,920,000[b]

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
M36D	4/19/2002	<250	11,000	<250	<250	15,000	<250	<250	<1,200	51,000[b]
M37D	4/19/2002	<100	130	<100	<100	5,500	<100	<100	<500	8,330[b]
RW06	1/11/2002	72,000	61,000	1,100J	<5,000	22,000	<5,000	<5,000	520,000	718,000[b]
RW06	4/17/2002	24,000J	42,000	<25,000	<25,000	<25,000	<25,000	<25,000	570,000	706,000[b]
RW06	7/14/2002	12,000	48,000	<2,500	<2,500	4,600	<2,500	<2,500	120,000	206,600[b]
RW11	10/22/2001	1.9J	560	<10	<10	34	<10	<10	3.1J	612[b,c]
RW11	1/10/2002	<250	2,700	<250	<250	6,600	<250	<250	290J	12,300[b]
RW11	4/17/2002	<50	100	<50	<50	880	<50	<50	<250	2,680[b]
RW11	7/14/2002	320	5,900	<50	<50	3,600	<50	<50	68J	11,820[b]
RW12	10/8/2001	730	12,000	<500	<500	5,600	<500	<500	200J	21,130[b]
RW12	1/10/2002	250	7,200	<250	<250	9,300	<250	<250	<1,200	18,050[b]
RW12	4/17/2002	59J	7,800	<250	<250	6,200	<250	<250	460J	16,300[b]
RW12	7/14/2002	310	8,300	<250	<250	5,100	<250	<250	700J	16,610[b]
RW13	10/8/2001	1,000	2,200	7J	<50	660	<50	<50	59J	4,020[b]
RW13	1/10/2002	0.62J	120	<2.5	<2.5	59	<2.5	<2.5	110	393.3[b]
RW13	4/17/2002	<25	110	<25	<25	<25	<25	<25	910	1,140[b]
RW13	7/14/2002	<10	150	<10	<10	99	<10	<10	960	1,308[b]
RW14	10/8/2001	26	130	0.86J	<5	400	<5	<5	3.5J	573[b]
RW14	1/11/2002	430	3,000	<50	6.4J	4,900	<50	<50	2,100	11,042[b]
RW14	4/17/2002	180	3,000	18J	<50	4,900	<50	<50	730	9,120[b]
RW14	7/14/2002	480	1,500	12J	<50	2,300	<50	<50	680	5,160[b]
RW15	10/8/2001	4,200	4,900	12J	<100	1,100	<100	<100	130J	10,200[b]
RW15	1/11/2002	2,700	2,300	38	12J	990	<25	<25	29J	6,028[b]
RW15	4/17/2002	1,800	1,300	<25	<25	590	<25	<25	<120	3,690
RW15	7/14/2002	1,600	1,200	10J	<25	220	<25	<25	<120	3,160[b]
RW16	10/22/2001	<50	560	<50	<50	1,100	<50	<50	<250	1,660
RW16	1/10/2002	<50	680	<50	<50	1,600	<50	<50	<250	2,280
RW16	4/17/2002	<50	27J	<50	<50	1,200	<50	<50	<250	1,200
RW16	7/14/2002	<50	790	<50	<50	1,800	<50	<50	<250	2,590[b]
RW17	10/22/2001	<1,000	76,000	<1,000	<1,000	25,000	<1,000	<1,000	<5,000	104,100[b]
RW17	1/10/2002	<1,000	61,000	<1,000	<1,000	27,000	<1,000	<1,000	<5,000	89,700[b]
RW17	4/17/2002	<1	110	<1	<1	51	<1	<1	<5	164.4[b]
RW17	7/14/2002	<1,000	72,000	310J	<1,000	22,000	<1,000	<1,000	<5,000	96,000[b]
PIN18		**Wastewater Neutralization Area**								
0500	4/16/2002	0.25J	1	0.4J	<1	<1	<1	<1	<5	1
0501	4/16/2002	<1	<1	<1	<1	<1	<1	<1	0.39J	ND
0502	4/16/2002	<1	<1	<1	<1	<1	<1	<1	0.85J	ND
0503	4/13/2002	<1	<1	<1	<1	<1	<1	<1	0.78J	ND
0504	4/16/2002	<1	<1	<1	<1	<1	<1	<1	0.43J	ND[c]
0505	4/13/2002	0.45J	1.8	<1	<1	<1	0.55J	<1	<5	1.8
0506	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0507	4/13/2002	<1	<1	<1	<1	<1	<1	<1	0.62J	ND
0508	4/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
0509	4/13/2002	<1	<1	<1	<1	<1	<1	<1	0.48J	ND
0510	4/13/2002	<1	<1	<1	<1	<1	<1	<1	0.78J	ND

Table 7 (continued). VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
0511	4/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0512	4/16/2002	<1	<1	<1	<1	<1	<1	<1	0.34J	ND
0513	4/16/2002	<1	0.25J	<1	<1	<1	<1	<1	0.56J	ND
0514	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0515	4/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0516	4/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0517	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0518	4/13/2002	<1	<1	<1	<1	<1	<1	<1	0.31J	ND
0519	4/13/2002	<1	<1	<1	<1	6.7	<1	<1	<5	6.7[b,c]
0520	4/15/2002	<1	<1	<1	<1	<1	<1	<1	0.3J	ND
0521	4/15/2002	<1	1.1	<1	<1	<1	<1	<1	<5	1.1
0522	4/15/2002	<1	0.51J	<1	<1	<1	<1	<1	0.32J	ND
0523	4/15/2002	<1	<1	<1	<1	<1	<1	<1	0.49J	ND[c]
0524	4/15/2002	<1	0.29J	<1	<1	<1	<1	<1	0.63J	ND[c]
0525	4/16/2002	<1	<1	<1	<1	<1	<1	<1	0.48J	ND[c]
0526	4/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	3.7[b]
RW02	10/11/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
RW02	1/10/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
RW02	4/16/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
RW02	7/15/2002	<1	<1	<1	<1	<1	<1	<1	0.4J	ND[b]
RW03	10/11/2001	<1	<1	<1	<1	<1	<1	<1	<5	ND
RW03	1/10/2002	<1	0.49J	<1	<1	<1	<1	<1	0.41J	ND[b]
RW03	4/15/2002	0.11J	0.44J	<1	<1	<1	<1	<1	<5	ND
RW03	7/15/2002	0.22J	0.4J	<1	<1	<1	<1	<1	0.46J	ND
PIN21		**Perimeter Monitoring Wells**								
0500	1/9/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0500	4/9/2002	<1	<1	<1	<1	<1	<1	<1	1.3J	ND
0500	7/14/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0501	10/3/2001	<1	1.6	0.12J	<1	<1	<1	<1	1.5J	1.6
0501	1/9/2002	<1	1.8	0.14J	<1	<1	<1	<1	0.54J	1.8
0501	4/9/2002	<1	1.5	<1	<1	<1	<1	<1	<5	1.5
0501	7/14/2002	<1	1.1	<1	<1	<1	<1	<1	0.54J	1.1
0502	1/9/2002	<1	<1	<1	<1	<1	<1	<1	0.82J	ND
0502	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0502	7/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0503	10/3/2001	<1	<1	<1	<1	<1	<1	<1	1.2J	ND
0503	1/9/2002	<1	<1	<1	<1	<1	<1	<1	1.4J	ND
0503	4/13/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0503	7/15/2002	0.13J	<1	<1	<1	<1	<1	<1	<5	ND
0504	1/9/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0504	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND[b]
0504	7/15/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND
0505	10/3/2001	<1	0.14J	<1	<1	0.31J	0.33J	<1	2.5J	ND
0505	1/9/2002	<1	<1	<1	<1	<1	0.27J	<1	<5	ND
0505	4/17/2002	<1	<1	<1	<1	<1	<1	<1	<5	ND

Table 7 (continued). VOCs in Samples Collected at the STAR Center
(reported in micrograms per liter)

Location	Date Sampled	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl chloride	1,1-DCA	Chloro-ethane	Methylene chloride	Total VOCs[a]
0505	7/15/2002	<1	<1	<1	<1	0.21J	0.32J	<1	<5	ND
0512	10/3/2001	<1	2	0.18J	<1	4.1	<1	<1	0.77J	6.1
0512	1/9/2002	<1	2.8	0.22J	<1	8.6	<1	<1	<5	11.4[c]
0512	4/16/2002	<1	2.7	<1	<1	3.7	<1	<1	<5	6.4[c]
0512	7/15/2002	<1	1.3	<1	<1	1.6	<1	<1	<5	2.9

[a]"J" values are not included in the "Total VOCs" value.
[b]See the "BTEX Table" for additional analytical results.
[c]See the "Additional VOCs Table" for additional analytical results.
ND = Not detected.
J = Estimated value, result is between the reporting limit and the method detection limit.

Table 8. BTEX Compounds in Samples Collected at the STAR Center
(reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
PIN05		**Trench Site**				
0500	4/10/2002	<1	<1	<1	ND	ND
PIN06		**Old Drum Storage Site**				
0500	1/16/2002	<1	<1	<1	ND	ND
0500	4/12/2002	<1	<1	<1	ND	ND
0500	7/16/2002	<1	<1	<1	ND	ND
0501	1/16/2002	<1	<1	<1	ND	ND
0501	4/12/2002	<1	<1	<1	ND	ND
0501	7/17/2002	<1	<1	<1	ND	ND
PIN09		**Incinerator Site**				
0500	1/15/2002	<1	<1	<1	ND	ND
0500	4/12/2002	<1	<1	<1	ND	ND
0500	7/16/2002	<1	<1	<1	ND	ND
PIN10		**Incinerator Ditch**				
0500	1/14/2002	<1	<1	<1	ND	ND
0500	4/12/2002	<1	<1	<1	ND	ND
0500	7/17/2002	0.15J	0.53J	1.8	1.2	3
PIN12		**Industrial Drain Leaks Building 100**				
0508	1/16/2002	<1	<1	<1	ND	ND
0508	4/17/2002	<1	<1	<1	ND	ND
0508	7/17/2002	<1	<1	<1	ND	ND
0509	10/10/2001	<1	<1	<1	ND	ND
0509	1/16/2002	<1	<1	<1	ND	ND
0509	4/17/2002	<1	<1	<1	ND	ND
0509	7/17/2002	<1	<1	<1	ND	ND
0510	10/10/2001	<1	<1	<1	ND	ND
0510	1/16/2002	<1	<1	<1	ND	ND
0510	4/11/2002	<1	<1	<1	ND	ND
0510	7/17/2002	<1	<1	<1	ND	ND
0511	1/15/2002	<1	<1	<1	ND	ND
0511	4/15/2002	<1	<1	<1	ND	ND
0511	7/13/2002	<1	<1	<1	ND	ND
0512	1/16/2002	<1	<1	<1	ND	ND
0512	4/13/2002	<1	<1	<1	ND	ND
0512	7/13/2002	<1	<1	<1	ND	ND
0513	10/3/2001	<1	<1	<1	ND	ND
0513	1/9/2002	<1	<1	<1	ND	ND
0513	4/11/2002	<1	<1	<1	ND	ND
0513	7/13/2002	<1	<1	<1	ND	ND
0514	10/3/2001	<1	<1	<1	ND	ND
0514	1/9/2002	<1	<1	<1	ND	ND
0514	4/11/2002	<2.5	<2.5	<2.5	ND	ND
0514	7/13/2002	<1	<1	<1	ND	ND
0515	10/7/2001	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
0515	1/15/2002	<1	<1	<1	0.72J	ND
0515	4/13/2002	<1	<1	<1	0.68J	ND
0515	7/13/2002	<1	<1	<1	ND	ND
0516	1/15/2002	<1	<1	<1	ND	ND
0516	4/13/2002	<1	<1	<1	ND	ND
0516	7/13/2002	<1	<1	<1	ND	ND
0517	1/16/2002	<1	<1	<1	ND	ND
0517	4/13/2002	<1	<1	<1	ND	ND
0517	7/13/2002	<1	<1	<1	ND	ND
0518	10/7/2001	<1	<1	<1	ND	ND
0518	1/16/2002	<1	<1	<1	ND	ND
0518	4/13/2002	<1	<1	<1	ND	ND
0518	7/13/2002	<1	<1	<1	ND	ND
0520	10/10/2001	<5	0.97J	<5	ND	ND
0520	1/16/2002	<5	1.3J	<5	ND	ND
0520	4/12/2002	<5	<5	<5	ND	ND
0520	7/16/2002	0.43J	2J	1.4J	0.46J	ND
0521	10/10/2001	0.12J	<1	<1	0.16J	ND
0521	1/16/2002	0.15J	<1	<1	ND	ND
0521	4/12/2002	<1	<1	<1	ND	ND
0521	7/16/2002	0.22J	0.17J	<1	ND	ND
0522	10/10/2001	<1	<1	<1	ND	ND
0522	1/14/2002	<1	<1	<1	ND	ND
0522	4/12/2002	<1	<1	<1	ND	ND
0522	7/17/2002	<1	<1	<1	ND	ND
0523	10/10/2001	<1	<1	<1	ND	ND
0523	1/14/2002	<1	<1	<1	ND	ND
0523	4/12/2002	<1	<1	<1	ND	ND
0523	7/17/2002	<1	<1	<1	ND	ND
0524	10/6/2001	<10	<10	<10	ND	ND
0524	1/15/2002	<10	<10	<10	ND	ND
0524	4/13/2002	2.6J	<10	<10	ND	ND
0524	7/13/2002	<100	<100	<100	ND	ND
0525	10/6/2001	<1	<1	<1	ND	ND
0525	1/15/2002	<1	<1	<1	ND	ND
0525	4/13/2002	<1	<1	<1	ND	ND
0525	7/13/2002	<1	<1	<1	ND	ND
0526	10/3/2001	<1	<1	<1	ND	ND
0526	1/16/2002	<1	<1	<1	ND	ND
0526	4/13/2002	<1	<1	<1	0.17J	ND
0526	7/13/2002	<1	<1	<1	ND	ND
0527	10/7/2001	<1	<1	<1	ND	ND
0527	4/15/2002	<1	<1	<1	ND	ND
0528	10/6/2001	<1	<1	<1	0.15J	ND
0528	4/15/2002	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
RW01	10/22/2001	<250	<250	<250	ND	ND
RW01	1/14/2002	<100	<100	<100	ND	ND
RW01	4/11/2002	<250	<250	<250	ND	ND
RW01	7/15/2002	<250	<250	<250	ND	ND
RW02	10/10/2001	<25	<25	<25	ND	ND
RW02	1/14/2002	<25	<25	<25	ND	ND
RW02	4/11/2002	<10	<10	<10	ND	ND
RW02	7/15/2002	<25	<25	<25	ND	ND
S29C	1/11/2002	0.45J	<1	<1	ND	ND
S29C	4/16/2002	0.45J	<2.5	<2.5	ND	ND
S29C	7/12/2002	<1	<1	<1	ND	ND
S30B	1/11/2002	<250	<250	<250	ND	ND
S30B	4/16/2002	<250	<250	<250	ND	ND
S30B	7/12/2002	<250	<250	<250	ND	ND
S31B	1/11/2002	<1	<1	<1	ND	ND
S31B	4/16/2002	<1	<1	<1	ND	ND
S31B	7/12/2002	<1	0.38J	<1	ND	ND
S32B	1/11/2002	<1	<1	<1	ND	ND
S32B	4/16/2002	0.16J	<1	<1	ND	ND
S32B	7/12/2002	<1	<1	<1	ND	ND
S33C	1/11/2002	2.1J	<10	<10	ND	ND
S33C	4/16/2002	2.2J	<5	<5	ND	ND
S33C	7/13/2002	<10	<10	<10	ND	ND
S35B	1/11/2002	<1,000	<1,000	<1,000	ND	ND
S35B	4/15/2002	<2,500	<2,500	<2,500	ND	ND
S35B	7/12/2002	<2,500	<2,500	<2,500	ND	ND
S36B	1/11/2002	<1	<1	<1	ND	ND
S36B	4/16/2002	<1	<1	<1	ND	ND
S36B	7/13/2002	<1	<1	<1	ND	ND
S37B	1/11/2002	0.2J	<1	<1	ND	ND
S37B	4/16/2002	<5	<5	<5	ND	ND
S37B	7/12/2002	<10	<10	<10	ND	ND
S54D	1/12/2002	<500	<500	<500	ND	ND
S54D	4/15/2002	230J	<1,000	<1,000	260J	ND
S54D	7/12/2002	<500	<500	<500	ND	ND
S55B	1/12/2002	34J	<50	<50	ND	ND
S55B	4/15/2002	<100	32J	<100	ND	ND
S55B	7/11/2002	<250	<250	<250	ND	ND
S55C	1/12/2002	<100	<100	<100	ND	ND
S55C	4/15/2002	<100	<100	<100	ND	ND
S55C	7/11/2002	<100	<100	<100	ND	ND
S56B	1/12/2002	<1	<1	<1	ND	ND
S56B	4/15/2002	<1	<1	<1	ND	ND
S56B	7/12/2002	<1	<1	<1	ND	ND
S56C	1/12/2002	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
S56C	4/15/2002	<1	<1	<1	ND	ND
S56C	7/12/2002	<1	<1	<1	ND	ND
S56D	1/12/2002	<1	<1	<1	ND	ND
S56D	4/15/2002	<1	0.26J	<1	ND	ND
S56D	7/12/2002	<1	<1	<1	ND	ND
S57B	1/12/2002	<1	<1	<1	ND	ND
S57B	4/15/2002	<1	<1	<1	ND	ND
S57B	7/11/2002	<1	<1	<1	ND	ND
S57C	1/12/2002	<1,000	<1,000	<1,000	ND	ND
S57C	4/15/2002	<1,000	<1,000	<1,000	ND	ND
S57C	7/11/2002	<1,000	<1,000	<1,000	ND	ND
S57D	1/12/2002	<5	<5	<5	ND	ND
S57D	4/15/2002	2.3J	1.1J	<5	1.3J	ND
S57D	7/11/2002	<2.5	<2.5	<2.5	ND	ND
S59B	1/10/2002	<1	<1	<1	ND	ND
S59B	4/12/2002	<1	<1	<1	ND	ND
S59B	7/11/2002	<1	<1	<1	ND	ND
S59C	1/10/2002	<1	<1	<1	ND	ND
S59C	4/12/2002	0.33J	<1	<1	ND	ND
S59C	7/11/2002	<1	<1	<1	ND	ND
S59D	1/10/2002	<1	<1	<1	ND	ND
S59D	4/12/2002	<1	<1	<1	ND	ND
S59D	7/11/2002	<1	<1	<1	ND	ND
S60B	1/10/2002	0.14J	<1	<1	ND	ND
S60B	4/12/2002	0.25J	<1	<1	ND	ND
S60B	7/11/2002	<1	<1	<1	ND	ND
S60C	1/10/2002	<1	0.27J	<1	ND	ND
S60C	4/12/2002	<1	0.3J	<1	ND	ND
S60C	7/11/2002	<1	<1	<1	ND	ND
S60D	1/10/2002	<1	<1	<1	ND	ND
S60D	4/12/2002	<1	<1	<1	ND	ND
S60D	7/11/2002	<1	<1	<1	ND	ND
S67B	1/10/2002	<10	<10	<10	ND	ND
S67B	4/12/2002	<10	<10	<10	ND	ND
S67B	7/15/2002	<10	<10	<10	ND	ND
S67C	1/10/2002	<10	<10	<10	ND	ND
S67C	4/12/2002	<10	<10	<10	ND	ND
S67C	7/15/2002	<10	<10	<10	ND	ND
S67D	1/10/2002	<1	<1	<1	ND	ND
S67D	4/12/2002	<2.5	<2.5	<2.5	ND	ND
S67D	7/15/2002	<2.5	<2.5	<2.5	ND	ND
S68B	4/11/2002	<1	<1	<1	ND	ND
S68B	7/16/2002	<1	<1	<1	ND	ND
S68C	4/11/2002	<1	<1	<1	ND	ND
S68C	7/16/2002	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
S68D	4/11/2002	<1	<1	<1	ND	ND
S68D	7/16/2002	<1	<1	<1	ND	ND
S69B	4/10/2002	<1	<1	<1	ND	ND
S69B	7/14/2002	<1	<1	<1	ND	ND
S69C	4/10/2002	<1	<1	<1	ND	ND
S69C	7/14/2002	<1	<1	<1	ND	ND
S69D	4/10/2002	<1	<1	<1	ND	ND
S69D	7/14/2002	<1	0.29J	<1	ND	ND
S70B	4/10/2002	<1	<1	<1	ND	ND
S70B	7/14/2002	<1	0.24J	<1	ND	ND
S70C	4/10/2002	<1	<1	<1	ND	ND
S70C	7/14/2002	<1	<1	<1	0.16J	ND
S70D	4/10/2002	<1	<1	<1	ND	ND
S70D	7/14/2002	<1	<1	<1	ND	ND
S71B	4/11/2002	<1	<1	<1	ND	ND
S71B	7/13/2002	<1	<1	<1	ND	ND
S71C	4/11/2002	<1	<1	<1	ND	ND
S71C	7/13/2002	<1	<1	<1	ND	ND
S71D	4/11/2002	<1	<1	<1	ND	ND
S71D	7/13/2002	<1	<1	<1	ND	ND
S72B	4/9/2002	<1	<1	<1	ND	ND
S72B	7/15/2002	<1	<1	<1	ND	ND
S72C	4/10/2002	<1	<1	<1	ND	ND
S72C	7/15/2002	<1	<1	<1	ND	ND
S72D	4/10/2002	<1	<1	<1	ND	ND
S72D	7/15/2002	<1	<1	<1	ND	ND
S73B	4/10/2002	<1	<1	<1	ND	ND
S73B	7/15/2002	<1	<1	<1	ND	ND
S73C	4/10/2002	<1	<1	<1	ND	ND
S73C	7/15/2002	<1	<1	<1	ND	ND
S73D	4/10/2002	<1	<1	<1	ND	ND
S73D	7/15/2002	<1	<1	<1	ND	ND
TE03	10/6/2001	<1	<1	<1	ND	ND
TE03	1/16/2002	<1	<1	<1	ND	ND
TE03	4/13/2002	<1	<1	<1	ND	ND
TE03	7/13/2002	<1	<1	<1	ND	ND
PIN15		**Northeast Site**				
0506	10/3/2001	<1	<1	<1	ND	ND
0506	4/17/2002	<1	<1	<1	ND	ND
0507	10/3/2001	<1	<1	<1	ND	ND
0507	4/17/2002	<1	<1	<1	ND	ND
0510	4/17/2002	<1	<1	<1	ND	ND
0513	4/18/2002	<1	<1	<1	ND	ND
0514	10/5/2001	1	<1	<1	ND	1
0514	1/8/2002	7.9	1.6	0.4J	0.5J	10.8

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
0514	4/17/2002	<1	<1	<1	ND	ND
0514	7/12/2002	<1	<1	<1	ND	ND
0515	10/5/2001	<1	<1	<1	ND	ND
0515	1/8/2002	<1	<1	<1	ND	ND
0515	4/17/2002	<1	<1	<1	ND	ND
0515	7/12/2002	<1	<1	<1	ND	ND
0516	10/5/2001	<1	<1	<1	ND	ND
0516	1/8/2002	<1	<1	<1	ND	ND
0516	4/17/2002	<1	<1	<1	ND	ND
0516	7/12/2002	<1	<1	<1	ND	ND
0518	4/18/2002	<1	<1	<1	ND	ND
0520	10/3/2001	<1	<1	<1	ND	ND
0520	4/17/2002	<1	<1	<1	ND	ND
0523	4/18/2002	<1	<1	<1	ND	ND
0530	10/5/2001	<1	<1	<1	ND	ND
0530	1/8/2002	<1	<1	<1	ND	ND
0530	4/17/2002	<1	<1	<1	ND	ND
0530	7/12/2002	<1	<1	<1	ND	ND
0531	4/19/2002	<1	<1	<1	ND	ND
0533	4/19/2002	<250	<250	<250	ND	ND
0534	10/3/2001	<1	<1	<1	ND	ND
0534	4/17/2002	<1	<1	<1	ND	ND
0535	10/5/2001	1.2	0.8J	<1	ND	1.2
0535	1/8/2002	1.5	1	<1	0.15J	2.5
0535	4/17/2002	2	0.88J	<1	0.35J	2
0535	7/12/2002	1.9	0.66J	0.15J	0.54J	1.9
0536	10/9/2001	<2,500	<2,500	<2,500	ND	ND
0536	1/9/2002	<2,500	<2,500	<2,500	ND	ND
0536	4/19/2002	<1,000	<1,000	<1,000	ND	ND
0536	7/12/2002	<2,500	<2,500	<2,500	ND	ND
0537	10/5/2001	<250	<250	<250	51J	ND
0537	1/10/2002	<250	31J	<250	ND	ND
0537	4/18/2002	<50	<50	<50	ND	ND
0537	7/11/2002	14J	130	<100	ND	130
0538	1/10/2002	75J	2,000	<500	ND	2,000
0538	4/18/2002	<250	550	<250	ND	550
0538	7/12/2002	44J	550	<250	ND	550
0557	10/5/2001	<1	<1	<1	ND	ND
0557	4/18/2002	<1	<1	<1	ND	ND
0558	10/4/2001	<250	<250	<250	ND	ND
0558	1/10/2002	13J	<50	<50	ND	ND
0558	4/16/2002	<250	<250	<250	ND	ND
0559	10/4/2001	0.18J	0.17J	<1	0.12J	ND
0559	1/14/2002	0.12J	0.72J	<1	0.2J	ND
0559	4/17/2002	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
0559	7/11/2002	0.31J	<1	<1	ND	ND
0560	10/10/2001	<1	<1	<1	ND	ND
0560	1/11/2002	<1	<1	<1	ND	ND
0560	4/19/2002	<1	<1	<1	ND	ND
0560	7/16/2002	<1	<1	<1	ND	ND
0561	10/10/2001	<1	<1	<1	ND	ND
0561	1/11/2002	<1	<1	<1	ND	ND
0561	4/19/2002	<1	<1	<1	ND	ND
0561	7/16/2002	<1	<1	<1	ND	ND
0562	10/11/2001	<1	<1	<1	ND	ND
0562	1/11/2002	<1	<1	<1	ND	ND
0562	4/18/2002	<1	<1	<1	ND	ND
0562	7/16/2002	<1	<1	<1	ND	ND
0563	10/11/2001	0.24J	<1	<1	ND	ND
0563	1/11/2002	<1	<1	<1	ND	ND
0563	4/18/2002	<1	<1	<1	ND	ND
0563	7/16/2002	<1	<1	<1	ND	ND
0564	10/10/2001	0.22J	0.29J	<1	ND	ND
0564	1/11/2002	<1	<1	0.22J	0.23J	ND
0564	4/18/2002	<1	<1	<1	ND	ND
0564	7/16/2002	0.42J	<1	<1	ND	ND
0565	10/10/2001	<1	0.48J	<1	ND	ND
0565	1/11/2002	<1	0.71J	<1	ND	ND
0565	4/18/2002	<1	<1	<1	ND	ND
0565	7/16/2002	<1	<1	<1	ND	ND
0566	10/10/2001	0.26J	3.4	0.22J	0.26J	3.4
0566	1/11/2002	1.1	3.7	0.17J	0.16J	4.8
0566	4/19/2002	3.2	5.6	<1	0.62J	8.8
0566	7/16/2002	1.3	0.15J	0.64J	0.29J	1.3
0567	10/10/2001	<1	<1	<1	0.11J	ND
0567	1/11/2002	0.2J	<1	<1	ND	ND
0567	4/19/2002	<1	<1	<1	ND	ND
0567	7/16/2002	0.2J	<1	<1	ND	ND
M03D	10/4/2001	2.2	<1	<1	0.69J	2.2
M03D	4/18/2002	<1	<1	<1	ND	ND
M03S	4/18/2002	<1	<1	<1	ND	ND
M12D	10/4/2001	<1	<1	<1	ND	ND
M12D	4/18/2002	<1	<1	<1	ND	ND
M12S	4/18/2002	<1	<1	<1	0.32J	ND
M14D	10/4/2001	<1	<1	<1	ND	ND
M14D	4/17/2002	<1	<1	<1	ND	ND
M14S	4/17/2002	<1	<1	<1	ND	ND
M16D	10/4/2001	<1	<1	<1	ND	ND
M16D	4/18/2002	<1	<1	<1	ND	ND
M16S	10/4/2001	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
M16S	4/18/2002	<1	<1	<1	ND	ND
M17D	4/18/2002	<2,500	62,000	<2,500	ND	62,000
M17S	4/18/2002	<1	28	<1	ND	28
M24D	4/18/2002	<1	<1	<1	ND	ND
M27D	10/8/2001	16	2.1	0.85J	0.73J	20.2
M27D	1/8/2002	10	1.2	0.46J	0.32J	11.2
M27D	4/17/2002	21	2.2	0.99J	0.8J	25.2
M27D	7/12/2002	18	1.8	0.99J	2	21.8
M27S	10/8/2001	<1	<1	<1	ND	ND
M27S	1/8/2002	<1	<1	<1	ND	ND
M27S	4/17/2002	<1	<1	<1	ND	ND
M27S	7/12/2002	<1	<1	<1	ND	ND
M29D	10/6/2001	<1	<1	<1	ND	ND
M29D	1/9/2002	1	<1	<1	0.12J	1
M29D	4/17/2002	0.9J	<1	<1	ND	ND
M29D	7/12/2002	<1	<1	<1	ND	ND
M29S	10/6/2001	<1	<1	<1	ND	ND
M29S	1/9/2002	<1	<1	<1	ND	ND
M29S	4/17/2002	<1	<1	<1	ND	ND
M29S	7/12/2002	<1	<1	<1	ND	ND
M30D	4/18/2002	<1	<1	<1	ND	ND
M30S	4/18/2002	<2.5	<2.5	<2.5	ND	ND
M31D	10/5/2001	0.53J	0.94J	<2.5	ND	ND
M31D	1/10/2002	<50	34J	<50	ND	ND
M31D	4/19/2002	11	4.4J	<5	ND	11
M31D	7/12/2002	13	<5	<5	ND	13
M31S	10/5/2001	2	<1	<1	ND	2
M31S	1/10/2002	3	0.25J	<1	ND	3
M31S	4/19/2002	3.2	<1	<1	ND	3.2
M31S	7/12/2002	<1	<1	<1	ND	ND
M32D	10/4/2001	0.6J	<1	<1	ND	ND
M32D	1/8/2002	0.23J	<1	<1	ND	ND
M32D	4/17/2002	3.1	<1	<1	ND	3.1
M32D	7/11/2002	<1	<1	<1	ND	ND
M32S	10/4/2001	<1	<1	<1	ND	ND
M32S	1/8/2002	<1	<1	<1	ND	ND
M32S	4/17/2002	<1	<1	<1	ND	ND
M32S	7/11/2002	<1	<1	<1	ND	ND
M33D	10/5/2001	<1	<1	<1	ND	ND
M33D	4/18/2002	<1	<1	<1	ND	ND
M34D	10/8/2001	46J	100J	<250	ND	ND
M34D	1/10/2002	47J	48J	100J	ND	ND
M34D	4/19/2002	<500	3,400	<500	ND	3,400
M34D	7/12/2002	<2,500	30,000	<2,500	ND	30,000
M35D	4/19/2002	<100,000	170,000	<100,000	ND	170,000

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
M36D	4/19/2002	210J	25,000	<250	ND	25,000
M37D	4/19/2002	100	2,600	<100	ND	2,700
RW06	1/11/2002	<5,000	43,000	<5,000	ND	43,000
RW06	4/17/2002	<25,000	94,000	<25,000	ND	94,000
RW06	7/14/2002	410J	22,000	<2,500	420J	22,000
RW11	10/22/2001	2.3J	7.9J	<10	ND	ND
RW11	1/10/2002	56J	3,000	<250	ND	3,000
RW11	4/17/2002	37J	1,700	<50	12J	1,700
RW11	7/14/2002	29J	2,000	<50	ND	2,000
RW12	10/8/2001	<500	2,800	<500	ND	2,800
RW12	1/10/2002	32J	1,300	<250	ND	1,300
RW12	4/17/2002	<250	2,300	<250	ND	2,300
RW12	7/14/2002	40J	2,900	<250	ND	2,900
RW13	10/8/2001	14J	160	<50	ND	160
RW13	1/10/2002	9.3	94	0.58J	1	104.3
RW13	4/17/2002	23J	120	3.4J	6.9J	120
RW13	7/14/2002	12	87	1.6J	3.5J	99
RW14	10/8/2001	2.4J	17	<5	ND	17
RW14	1/11/2002	29J	550	24J	62	612
RW14	4/17/2002	27J	310	<50	11J	310
RW14	7/14/2002	14J	200	<50	ND	200
RW15	10/8/2001	<100	38J	<100	ND	ND
RW15	1/11/2002	5.9J	14J	<25	12.7J	ND
RW15	4/17/2002	<25	<25	<25	ND	ND
RW15	7/14/2002	9.8J	140	<25	ND	140
RW16	10/22/2001	<50	<50	<50	ND	ND
RW16	1/10/2002	<50	<50	<50	ND	ND
RW16	4/17/2002	<50	<50	<50	ND	ND
RW16	7/14/2002	8.6J	<50	<50	ND	ND
RW17	10/22/2001	<1,000	3,100	<1,000	ND	3,100
RW17	1/10/2002	<1,000	1,700	<1,000	ND	1,700
RW17	4/17/2002	<1	3.4	<1	ND	3.4
RW17	7/14/2002	<1,000	2,000	<1,000	ND	2,000
PIN18		**Wastewater Neutralization Area**				
0500	4/16/2002	<1	<1	<1	ND	ND
0501	4/16/2002	<1	<1	<1	ND	ND
0502	4/16/2002	<1	<1	<1	ND	ND
0503	4/13/2002	<1	<1	<1	ND	ND
0504	4/16/2002	<1	<1	<1	ND	ND
0505	4/13/2002	<1	<1	<1	ND	ND
0506	4/13/2002	<1	<1	<1	ND	ND
0507	4/13/2002	<1	<1	<1	ND	ND
0508	4/16/2002	0.32J	<1	<1	0.36J	ND
0509	4/13/2002	<1	<1	<1	ND	ND
0510	4/13/2002	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
0511	4/16/2002	<1	<1	<1	ND	ND
0512	4/16/2002	<1	<1	<1	ND	ND
0513	4/16/2002	<1	<1	<1	ND	ND
0514	4/13/2002	<1	<1	<1	ND	ND
0515	4/15/2002	<1	<1	<1	ND	ND
0516	4/15/2002	<1	<1	<1	ND	ND
0517	4/13/2002	<1	<1	<1	ND	ND
0518	4/13/2002	<1	<1	<1	ND	ND
0519	4/13/2002	0.71J	<1	<1	ND	ND
0520	4/15/2002	<1	<1	<1	ND	ND
0521	4/15/2002	<1	<1	<1	ND	ND
0522	4/15/2002	<1	<1	<1	ND	ND
0523	4/15/2002	<1	<1	<1	ND	ND
0524	4/15/2002	<1	<1	<1	ND	ND
0525	4/16/2002	<1	<1	<1	ND	ND
0526	4/16/2002	1.3	<1	1	0.29J	3.7
RW02	10/11/2001	<1	<1	<1	ND	ND
RW02	1/10/2002	<1	<1	<1	ND	ND
RW02	4/16/2002	<1	<1	<1	ND	ND
RW02	7/15/2002	0.18J	<1	<1	ND	ND
RW03	10/11/2001	<1	<1	<1	ND	ND
RW03	1/10/2002	<1	<1	0.21J	0.14J	ND
RW03	4/15/2002	<1	<1	<1	ND	ND
RW03	7/15/2002	<1	<1	<1	ND	ND
PIN21		**Perimeter Monitoring Wells**				
0500	1/9/2002	<1	<1	<1	ND	ND
0500	4/9/2002	<1	<1	<1	ND	ND
0500	7/14/2002	<1	<1	<1	ND	ND
0501	10/3/2001	<1	<1	<1	ND	ND
0501	1/9/2002	<1	<1	<1	ND	ND
0501	4/9/2002	<1	<1	<1	ND	ND
0501	7/14/2002	<1	<1	<1	ND	ND
0502	1/9/2002	<1	<1	<1	ND	ND
0502	4/13/2002	<1	<1	<1	ND	ND
0502	7/15/2002	<1	<1	<1	ND	ND
0503	10/3/2001	<1	<1	<1	ND	ND
0503	1/9/2002	<1	<1	<1	ND	ND
0503	4/13/2002	<1	<1	<1	ND	ND
0503	7/15/2002	<1	<1	<1	ND	ND
0504	1/9/2002	<1	<1	<1	ND	ND
0504	4/17/2002	<1	0.17J	<1	ND	ND
0504	7/15/2002	<1	<1	<1	ND	ND
0505	10/3/2001	<1	<1	<1	ND	ND
0505	1/9/2002	<1	<1	<1	ND	ND
0505	4/17/2002	<1	<1	<1	ND	ND

Table 8 (continued). BTEX Compounds in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes[a]	Total BTEX[b]
0505	7/15/2002	<1	<1	<1	ND	ND
0512	10/3/2001	<1	<1	<1	ND	ND
0512	1/9/2002	<1	<1	<1	ND	ND
0512	4/16/2002	<1	<1	<1	ND	ND
0512	7/15/2002	<1	<1	<1	ND	ND

[a]m-, o-, p- Xylene if detected.
[b]"J" values are not included in the "Total BTEX" value.
ND = Not detected.
J = Estimated value, result is between the reporting limit and the method detection.

Table 9. Additional VOCs in Samples Collected at the STAR Center
(reported in micrograms per liter)

Location	Date Sampled	1,1,1-Trichloroethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Bromomethane	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Dichlorodifluoromethane	Tetrachloroethene	Trichlorofluoromethane
PIN06		**Old Drum Storage Site**											
0500	1/16/2002			0.21J									0.41J
0500	4/12/2002											0.31J	
0500	7/16/2002												0.46J
0501	1/16/2002		0.32J		1.2	9.3							
0501	4/12/2002				1.8	9.6							
0501	7/17/2002				0.77J	4.9							
PIN09		**Incinerator Site**											
0500	1/15/2002										0.34J		1.7
0500	7/16/2002												1.5
PIN12		**Industrial Drain Leaks Bldg 100**											
0509	10/10/2001												11
0509	4/17/2002												110
0509	7/17/2002												39
0510	7/17/2002												0.27J
0515	10/7/2001										1.2		
0520	4/12/2002											0.83J	
0521	10/10/2001			0.32J					0.16J		3.5		4
0521	1/16/2002			0.36J							1.9		5.3
0521	4/12/2002			0.55J									
0521	7/16/2002			1.2							1		
0523	4/12/2002									0.15J			
0524	1/15/2002												5.5J
0524	4/13/2002	4.7J											24
0525	1/15/2002										0.77J		
0525	4/13/2002											0.38J	
RW01	1/14/2002											22J	
S29C	4/16/2002										0.64J		0.58J

Table 9 (continued). Additional VOCs in Samples Collected at the STAR Center
(reported in micrograms per liter)

Location	Date Sampled	1,1,1-Trichloro-ethane	1,2-Dichloro-benzene	1,2-Dichloro-ethane	1,3-Dichloro-benzene	1,4-Dichloro-benzene	Bromo-methane	Chloroform	Chloro-methane	cis-1,3-Dichloro-propene	Dichloro-difluoro-methane	Tetrachloro-ethene	Trichloro-fluoro-methane
S31B	1/11/2002										0.37J		
S32B	1/11/2002										14		
S32B	4/16/2002										43		
S32B	7/12/2002										16		
S33C	4/16/2002										18		6.2
S33C	7/13/2002						21						
S35B	4/15/2002							620J				130J	
S37B	4/16/2002										6.4		2J
S55C	1/12/2002							16J					
S59C	1/10/2002												2.8
S59C	4/12/2002												1.1
S67B	1/10/2002										21		
S72D	7/15/2002							1.2					
PIN15		**PIN15**											
0506	10/3/2001							0.55J					
0510	4/17/2002							0.49J					
0557	10/5/2001												0.73J
0560	1/11/2002										2.5		
0562	1/11/2002												0.86J
0562	4/18/2002								2.4				
0563	10/11/2001							0.42J					
M14S	4/17/2002								2				
M16D	4/18/2002								4.8				
M16S	4/18/2002								2.1				
M29D	1/9/2002										0.91J		
M30D	4/18/2002								3.1				
M32D	4/17/2002												2.4
RW11	10/22/2001									18			

Table 9 (continued). Additional VOCs in Samples Collected at the STAR Center (reported in micrograms per liter)

Location	Date Sampled	1,1,1-Trichloroethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Bromomethane	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Dichlorodifluoromethane	Tetrachloroethene	Trichlorofluoromethane
PIN18		**Wastewater Neutralization Area**											
0504	4/16/2002											0.14J	
0519	4/13/2002												0.46J
0523	4/15/2002											0.41J	
0524	4/15/2002											0.56J	
0525	4/16/2002											0.33J	
PIN21		**PIN21**											
0512	1/9/2002												0.38J
0512	4/16/2002												0.18J

J Estimated value, result is between the reporting limit and the method detection limit.

Table 10. RCRA Metals and Mercury in Samples Collected at the STAR Center (reported in milligrams per liter)

Location	Date	Sample ID[a]	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
PIN06	**Old Drum Storage Site**									
0500	7/16/2002	N001	0.034	0.065	<0.005	0.0018J	<0.005	<0.0002	0.0043J	<0.01
0501	7/17/2002	N001	0.011	0.096	0.0017J	<0.01	<0.005	<0.0002	<0.01	<0.01
PIN09	**Incinerator Site**									
0500	7/16/2002	N001	0.022	0.07	<0.005	0.0023J	<0.005	<0.0002	<0.01	<0.01
PIN10	**Incinerator Ditch**									
0500	7/17/2002	N001	0.0078J	0.09	0.015	0.0049J	0.0037J	0.0006	0.012	<0.01
PIN12	**Industrial Drain Leaks Building 100**									
0508	7/17/2002	N001	<0.01	0.048	<0.005	<0.01	<0.005	<0.0002	<0.01	<0.01
0509	7/17/2002	N001	<0.01	0.1	<0.005	0.0029J	<0.005	0.000073J	0.0091J	<0.01
0510	7/17/2002	N001	0.0033J	0.066	<0.005	0.0042J	<0.005	<0.0002	<0.01	<0.01
0511	7/13/2002	N001	<0.01	0.018	<0.005	<0.01	<0.005	0.00021B	<0.01	<0.01
0512	7/13/2002	N001	<0.01	0.039	<0.005	0.0018J	<0.005	0.000083JB	<0.01	<0.01
0513	7/13/2002	N001	<0.01	0.066	<0.005	0.0035J	<0.005	<0.0002	<0.01	<0.01
0514	7/13/2002	N001	<0.01	0.069	<0.005	0.004J	<0.005	0.00017JB	<0.01	<0.01
0515	7/13/2002	N001	<0.01	0.046	<0.005	0.002J	<0.005	<0.0002	<0.01	<0.01
0516	7/13/2002	N001	<0.01	0.046	<0.005	0.003J	<0.005	<0.0002	<0.01	<0.01
0517	7/13/2002	N001	<0.01	0.042	<0.005	0.004J	<0.005	0.00014JB	<0.01	<0.01
0518	7/13/2002	N001	<0.01	0.023	<0.005	0.0035J	<0.005	<0.0002	<0.01	<0.01
0520	7/16/2002	N001	<0.01	0.042	<0.005	0.0068J	<0.005	<0.0002	<0.01	<0.01
0521	7/16/2002	N001	0.0038J	0.052	<0.005	<0.01	0.0047J	<0.0002	<0.01	<0.01
0522	7/17/2002	N001	<0.01	0.035	<0.005	0.0035J	<0.005	<0.0002	<0.01	<0.01
0523	7/17/2002	N001	<0.01	0.053	<0.005	0.0021J	<0.005	<0.0002	<0.01	<0.01
0524	7/13/2002	N001	<0.01	0.057	0.00088J	0.0045J	<0.005	0.00013JB	<0.01	<0.01
0525	7/13/2002	N001	0.023	0.056	<0.005	0.0025J	<0.005	<0.0002	<0.01	<0.01
0526	7/13/2002	N001	<0.01	0.1	<0.005	0.0044J	<0.005	<0.0002	<0.01	<0.01
0527	7/13/2002	N001	<0.01	0.08	<0.005	<0.01	<0.005	0.00026B	<0.01	<0.01
0528	7/13/2002	N001	<0.01	0.063	<0.005	<0.01	<0.005	<0.0002	<0.01	<0.01
RW01	7/3/2002	N001	<0.01	0.043	<0.005	0.02	0.028	<0.0002	<0.01	<0.01
RW01	7/15/2002	N001	<0.01	0.049	<0.005	0.0086J	<0.005	<0.0002	<0.01	<0.01
RW01	9/10/2002	N001	0.0039J	0.043	<0.005	0.0024J	0.002J	<0.0002	<0.01	<0.01
RW02	7/3/2002	N001	<0.01	0.03	<0.005	<0.01	<0.005	<0.0002	<0.01	<0.01
RW02	7/15/2002	N001	<0.01	0.036	<0.005	<0.01	<0.005	<0.0002	<0.01	<0.01
RW02	9/10/2002	N001	<0.01	0.032	<0.005	<0.01	<0.005	<0.0002	<0.01	<0.01
S29C	7/12/2002	N001	<0.01	0.05	<0.005	<0.01	0.0048J	<0.0002	<0.01	<0.01
S30B	7/12/2002	N001	0.005J	0.062	<0.005	0.0034J	0.0051	<0.0002	<0.01	<0.01
S31B	7/12/2002	N001	0.033	0.044	<0.005	<0.01	0.0032J	<0.0002	<0.01	<0.01
S32B	7/12/2002	N001	0.072	0.087	<0.005	<0.01	0.0042J	<0.0002	<0.01	<0.01
S33C	7/13/2002	N001	0.011	0.069	<0.005	0.014	0.0049J	<0.0002	<0.01	0.0029J
S35B	7/12/2002	N001	0.016	0.56	<0.005	0.0081J	<0.005	0.0002	<0.01	<0.01
S36B	7/13/2002	N001	0.008J	0.046	<0.005	0.0063J	0.0032J	<0.0002	<0.01	<0.01
S37B	7/12/2002	N001	0.0084J	0.048	<0.005	0.0074J	0.0042J	<0.0002	<0.01	<0.01
S54D	7/12/2002	N001	<0.01	0.042	0.0076	0.0074J	0.0018J	<0.0002	<0.01	<0.01
S55B	7/11/2002	N001	0.0058J	0.052	<0.005	0.028	0.0036J	0.00021	<0.01	<0.01
S55C	7/11/2002	N001	0.0072J	0.056	<0.005	0.028	0.0045J	<0.0002	<0.01	<0.01

Table 10 (continued). RCRA Metals and Mercury in Samples Collected at the STAR Center (reported in milligrams per liter)

Location	Date	Sample ID[a]	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
S56B	7/12/2002	N001	0.009J	0.13	<0.005	0.053	0.02	0.00026	<0.01	<0.01
S56C	7/12/2002	N001	<0.01	0.079	<0.005	0.013	0.0072	0.00036	<0.01	<0.01
S56D	7/12/2002	N001	<0.01	0.096	<0.005	0.016	0.007	<0.0002	<0.01	<0.01
S57B	7/11/2002	N001	0.0055J	0.11	<0.005	0.038	0.0094	<0.0002	<0.01	<0.01
S57C	7/11/2002	N001	0.004J	0.13	<0.005	0.033	0.026	0.00026	<0.01	<0.01
S57D	7/11/2002	N001	<0.01	0.093	<0.005	0.015	0.0059	0.00025	<0.01	<0.01
S59B	7/11/2002	N001	<0.01	0.054	<0.005	0.021	0.0042J	<0.0002	<0.01	<0.01
S59C	7/11/2002	N001	<0.01	0.04	<0.005	0.002J	<0.005	0.00013J	<0.01	<0.01
S59D	7/11/2002	N001	<0.01	0.043	<0.005	<0.01	<0.005	0.00015J	<0.01	<0.01
S60B	7/11/2002	N001	<0.01	0.056	<0.005	0.002J	0.0041J	0.00012J	<0.01	<0.01
S60C	7/11/2002	N001	<0.01	0.04	<0.005	<0.01	0.0072	<0.0002	<0.01	<0.01
S60D	7/11/2002	N001	<0.01	0.057	<0.005	0.0021J	<0.005	<0.0002	<0.01	<0.01
S67B	7/15/2002	N001	<0.01	0.075	<0.005	0.038	0.005J	<0.0002	<0.01	<0.01
S67C	7/15/2002	N001	<0.01	0.054	<0.005	0.0055J	<0.005	0.00019J	<0.01	<0.01
S67D	7/15/2002	N001	<0.01	0.07	<0.005	0.025	0.0018J	0.000088J	<0.01	<0.01
S68B	7/16/2002	N001	0.046	0.083	<0.005	0.0038J	0.0056	0.000083J	<0.01	<0.01
S68C	7/16/2002	N001	0.0071J	0.19	<0.005	0.24	0.036	0.00029	0.0048J	<0.01
S68D	7/16/2002	N001	<0.01	0.052	<0.005	0.0034J	0.0059	<0.0002	<0.01	<0.01
S69B	7/14/2002	N001	0.0067J	0.043	<0.005	0.0032J	0.0033J	<0.0002	<0.01	<0.01
S69C	7/14/2002	N001	<0.01	0.071	<0.005	0.034	0.0077	<0.0002	<0.01	<0.01
S69D	7/14/2002	N001	<0.01	0.052	<0.005	0.0043J	0.0057	<0.0002	<0.01	<0.01
S70B	7/14/2002	N001	0.004J	0.063	<0.005	0.0026J	0.0071	<0.0002	<0.01	<0.01
S70C	7/14/2002	N001	<0.01	0.11	<0.005	0.046	0.011	0.000077J	<0.01	<0.01
S70D	7/14/2002	N001	<0.01	0.056	<0.005	0.0055J	0.0055	<0.0002	<0.01	<0.01
S71B	7/13/2002	N001	0.0038J	0.071	<0.005	0.016	0.0068	<0.0002	<0.01	<0.01
S71C	7/13/2002	N001	0.0042J	0.14	<0.005	0.081	0.018	0.00016J	<0.01	<0.01
S71D	7/13/2002	N001	<0.01	0.056	<0.005	0.0029J	0.0049J	<0.0002	<0.01	<0.01
S72B	7/15/2002	N001	0.0047J	0.17	<0.005	0.015	0.0065	0.0003	<0.01	<0.01
S72C	7/15/2002	N001	<0.01	0.041	<0.005	0.0019J	0.002J	<0.0002	<0.01	<0.01
S72D	7/15/2002	N001	0.0083J	0.19	0.0046J	0.17	0.034	0.00023	<0.01	0.0043J
S73B	7/15/2002	N001	0.006J	0.054	<0.005	0.016	0.0075	0.0019	<0.01	<0.01
S73C	7/15/2002	N001	0.0048J	0.11	<0.005	0.017	0.0084	<0.0002	<0.01	<0.01
S73D	7/15/2002	N001	0.0047J	0.099	0.0018J	0.12	0.024	0.000076J	<0.02	0.0026J
TE03	7/13/2002	N001	<0.01	0.035	<0.005	0.0035J	<0.005	<0.0002	<0.01	<0.01
PIN21	**Perimeter Monitoring Wells**									
0500	7/14/2002	N001	<0.01	0.038	<0.005	0.0025J	0.0038J	<0.0002	<0.01	<0.01
0501	7/14/2002	N001	<0.01	0.068	<0.005	<0.01	0.0053	<0.0002	<0.01	<0.01
0502	7/15/2002	N001	0.006J	0.063	<0.005	0.0019J	<0.005	0.00019J	<0.01	<0.01
0503	7/15/2002	N001	0.008J	0.047	<0.005	<0.01	<0.005	<0.0002	<0.01	<0.01
0504	7/15/2002	N001	0.019	0.04	<0.005	0.0026J	<0.005	<0.0002	0.0077J	<0.01
0505	7/15/2002	N001	<0.01	0.021	<0.005	<0.01	<0.005	0.00019J	<0.01	<0.01
0512	7/15/2002	N001	<0.01	0.048	<0.005	0.0024J	<0.005	<0.0002	<0.01	<0.01

[a]N001 is an unfiltered sample, 0001 is a filtered sample.
J = Estimated value, result is between the reporting limit and the method detection limit.
B = Analyte also found in method blank.

Table 11. Arsenic Concentrations at the WWNA
(reported in milligrams per liter)

Location	Date	Arsenic (mg/L)
0500	7/16/2002	0.097
0501	7/16/2002	0.58
0502	7/16/2002	0.074
0521	7/16/2002	<0.01
0522	7/16/2002	0.037
0523	7/16/2002	<0.01
0524	7/16/2002	0.02
0525	7/16/2002	0.029
RW02	7/15/2002	0.098
RW03	7/15/2002	0.057

J = Estimated value, result is between the reporting limit and the method detection limit.

Table 12. Summary of Analytical Results for Ground Water Samples Collected at the Northeast Site Treatment System
(*reported in micrograms per liter unless otherwise noted)*

Location	Date Sampled	cis-1,2-DCE	trans-1,2-DCE	TCE	Methylene chloride	Vinyl chloride	Toluene	Benzene	MTBE	Total VOCs[a]	$CaCO_3$ mg/L	Fe mg/L
PIN15		Northeast Site										
INF1	7/3/2002	5,200	<100	2,300	7,200	1,400	680	23J	<1,000	16,780	460	4.6
INF1	7/25/2002	4,300	<100	1,700	1,700	1,200	330	14J	<1,000	9,230	500	5.2
INF1	8/8/2002	4,200	<100	1,000	740	1,200	400	<100	<1,000	7,540	360	7
INF1	8/20/2002	3,800	<100	1,300	1,000	1,200	260	11J	<1,000	7,560	490	6.3
INF1	9/10/2002	5,000	<100	1,300	270J	1,300	260	<100	<1,000	7,860	480	5.6
INF1	9/25/2002	3,400	<100	1,000	<500	650	180	<100	<1,000	5,230	520	4.4
EFF1	7/3/2002	<1	<1	<1	<5	<1	0.25J	<1	<10	10[b]	460	4.4
EFF1	7/25/2002	<1	<1	<1	<5	<1	<1	<1	<10	17[b]	500	3.5
EFF1	8/8/2002	<1	<1	<1	<5	<1	<1	<1	<10	4.8[b]	510	5
EFF1	8/20/2002	<1	<1	<1	0.72J	<1	<1	<1	<10	7[b]	480	4.7
EFF1	9/10/2002	<1	<1	<1	<5	<1	<1	<1	<10	ND	480	4.2
EFF1	9/25/2002	<1	<1	<1	0.3J	<1	<1	<1	<10	ND	510	3.7

[a] "J" values are not included in the "Total VOCs" value.
[b] Total VOCs value includes compounds not listed.
J = Estimated value, result is between the reporting limit and the method detection limit.

Table 13. Estimated Mass of VOCs Recovered from the Northeast Site and Building 100 Recovery Wells During July, August, and September 2002

Month	Volume Treated (gallons)	Concentration[a]						
		cis-1,2-DCE (µg/L)	trans-1,2-DCE (mg/L)	Toluene (µg/L)	TCE (µg/L)	Methylene Chloride (µg/L)	Vinyl Chloride (µg/L)	Total VOCs (µg/L)
July 2002	729,967	4,750	50	505	2,000	4,450	1,300	13,055
August 2002	723,104	4,000	50	330	1,150	870	1,200	7,600
September 2002	758,789	4,200	50	220	1,150	260	975	6,855

Month	Volume Treated (gallons)	Recovery[b]						
		cis-1,2-DCE (lbs)	trans-1,2-DCE (lbs)	Toluene (lbs)	TCE (lbs)	Methylene Chloride (lbs)	Vinyl Chloride (lbs)	Total VOCs (lbs)
July 2002	729,967	28.9	0.3	3.1	12.2	27.1	7.9	79.5
August 2002	723,104	24.1	0.3	2.0	6.9	5.3	7.2	45.9
September 2002	758,789	26.6	0.3	1.4	7.3	1.6	6.2	43.4

[a]These concentrations represent the average of weekly sampling results.
[b]Includes "J" (estimated) values. For any detection of "<", which indicates the laboratory could not detect that analyte, 50 percent of the "<" value was used for the calculation of recovery.

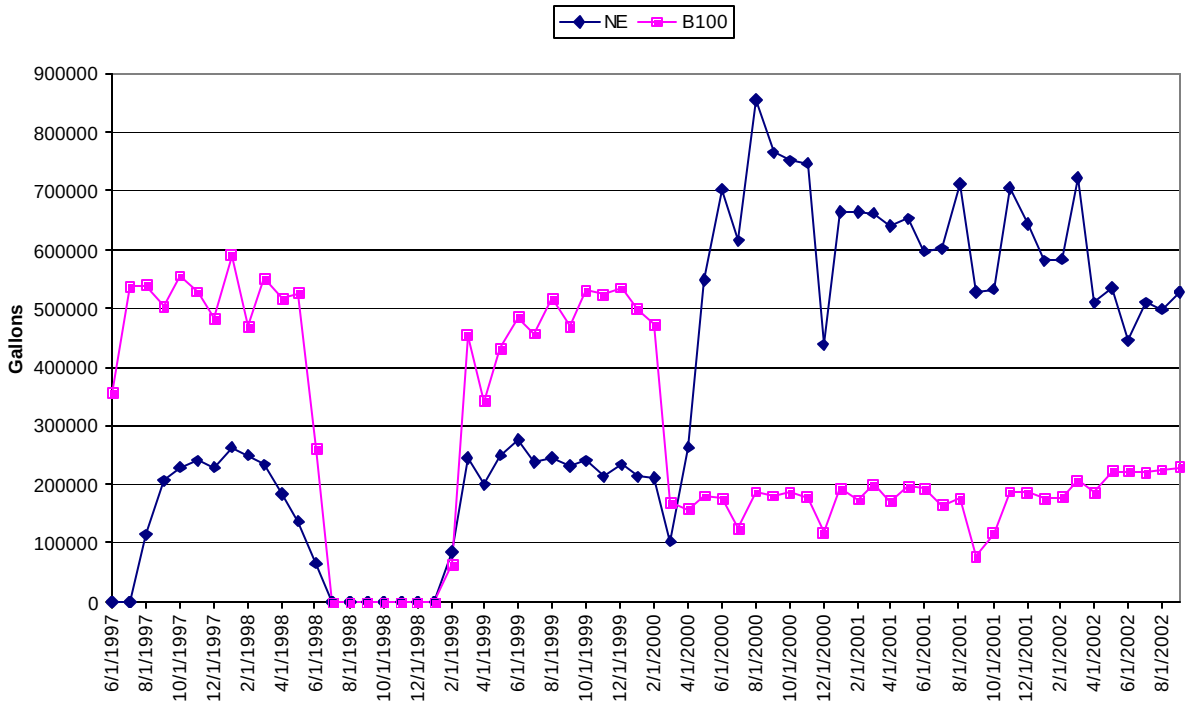

Chart 1. Historical Northeast Site and Building 100 Ground Water Recovery

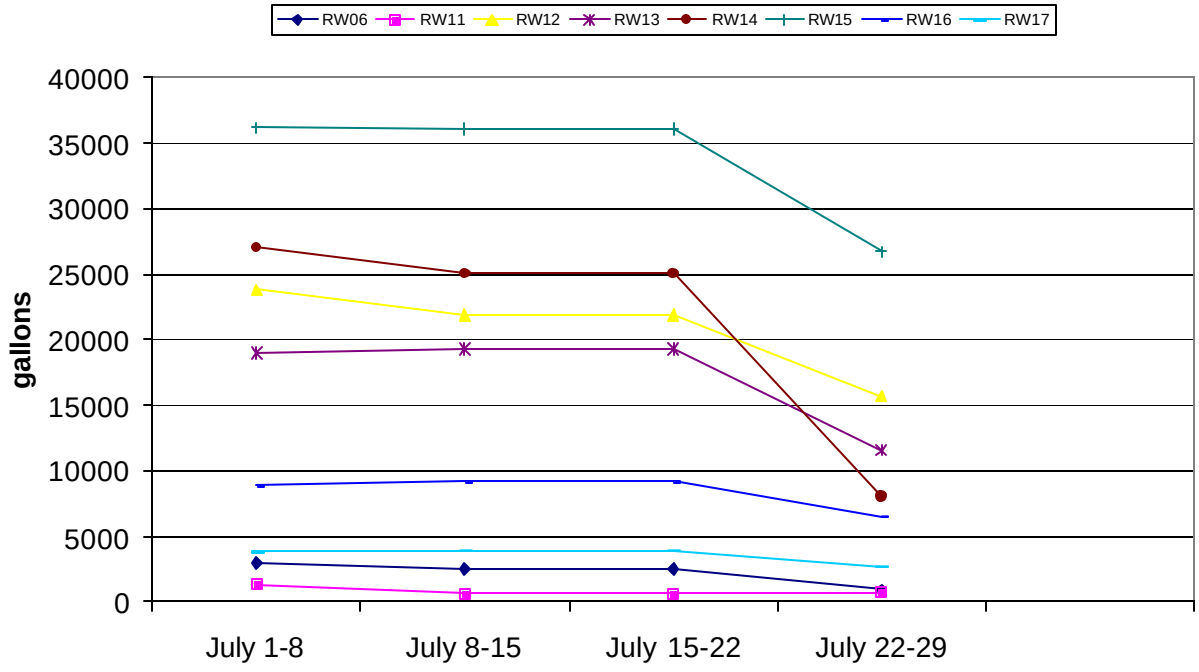

Chart 2. July 2002 Northeast Site (Individual Wells) Ground Water Recovery

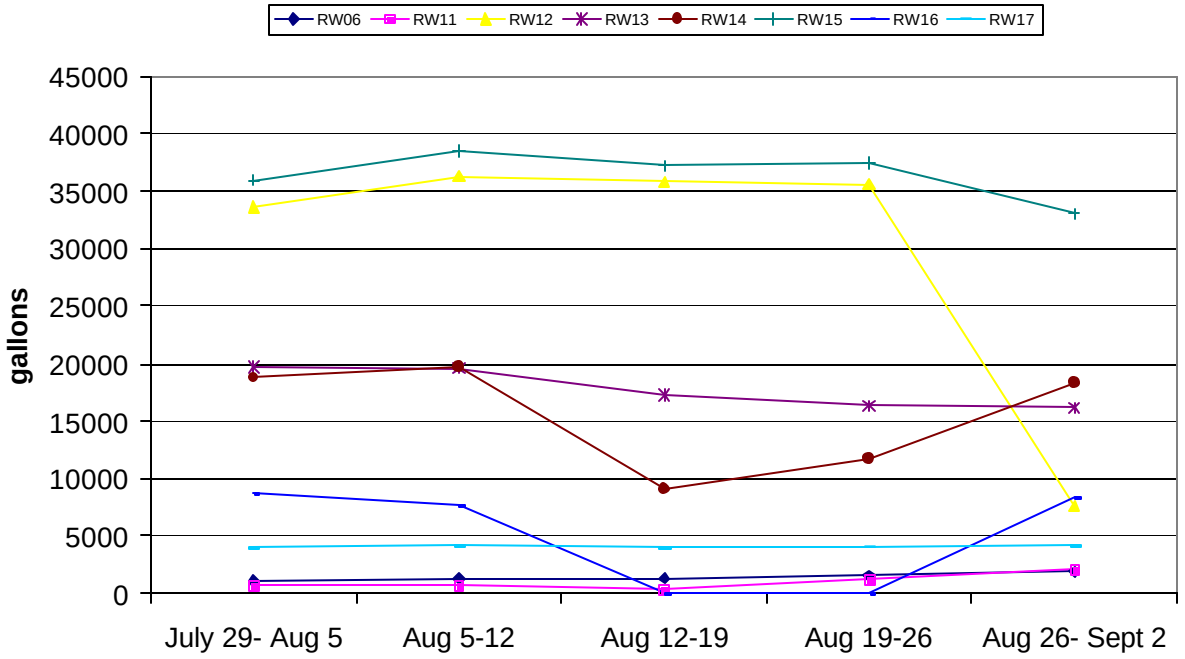

Chart 3. August 2002 Northeast Site (Individual Wells) Ground Water Recovery

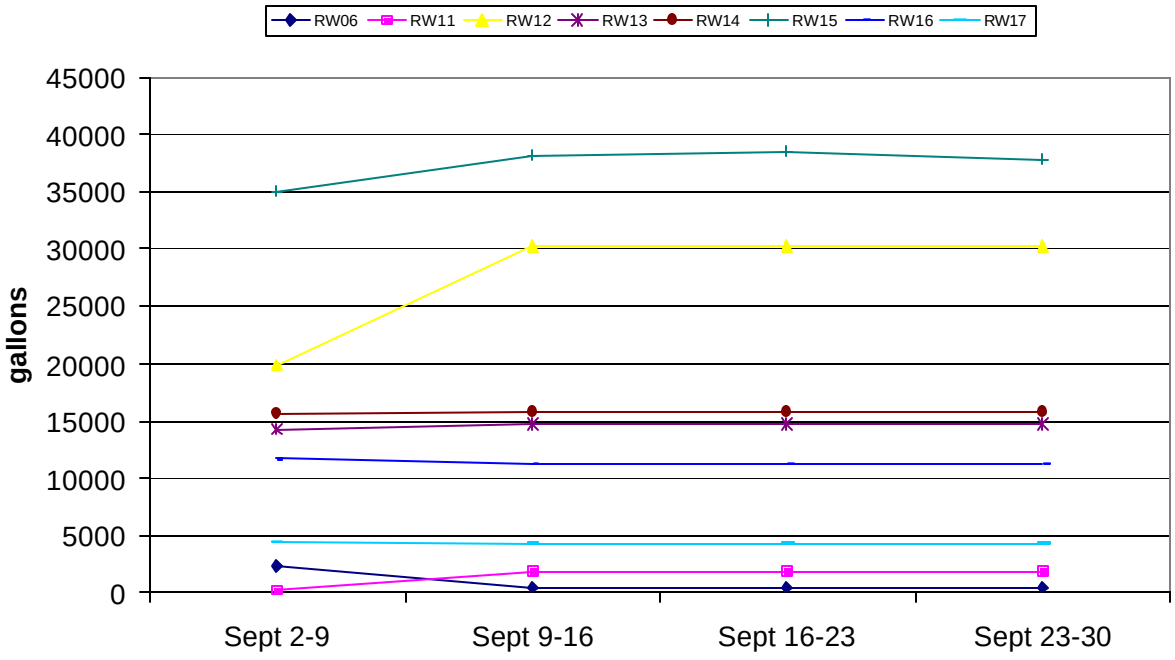

Chart 4. September 2002 Northeast Site (Individual Wells) Ground Water Recovery

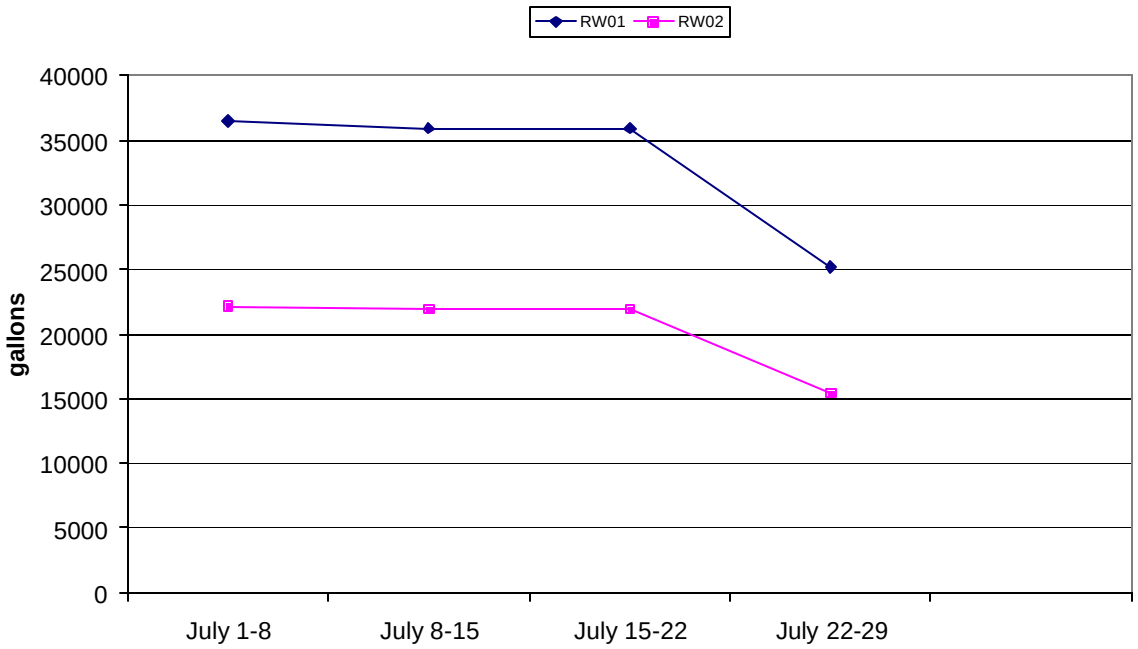

Chart 5. July 2002 Building 100 Ground Water Recovery

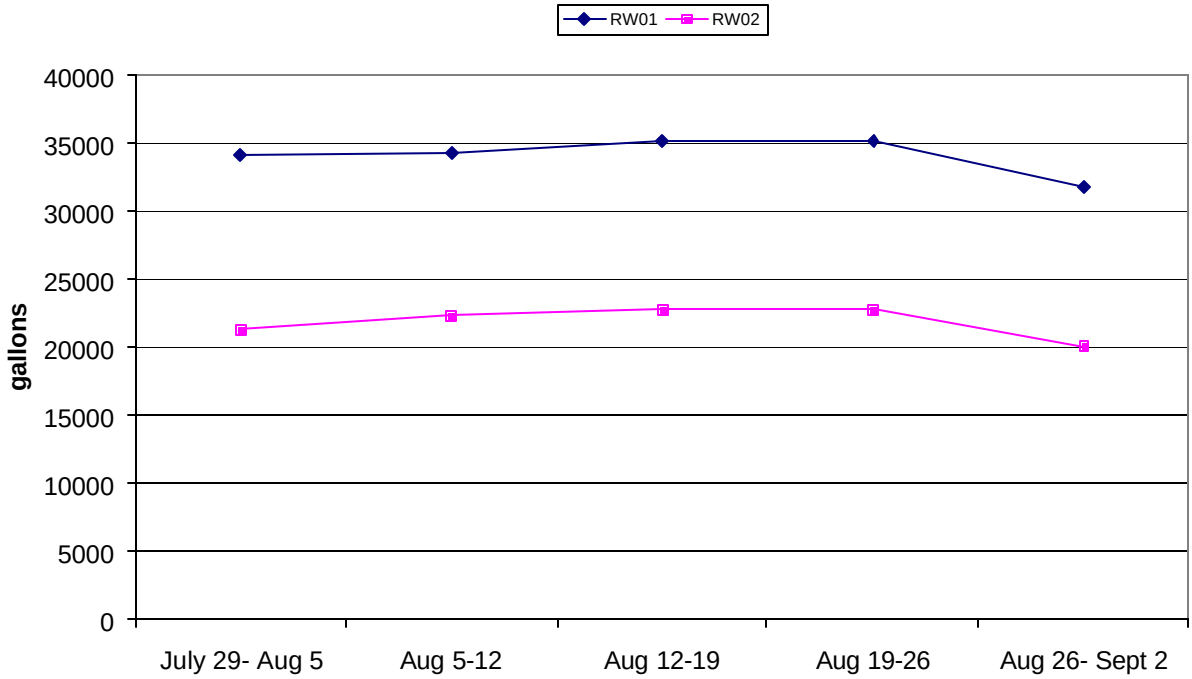

Chart 6. August 2002 Building 100 Ground Water Recovery

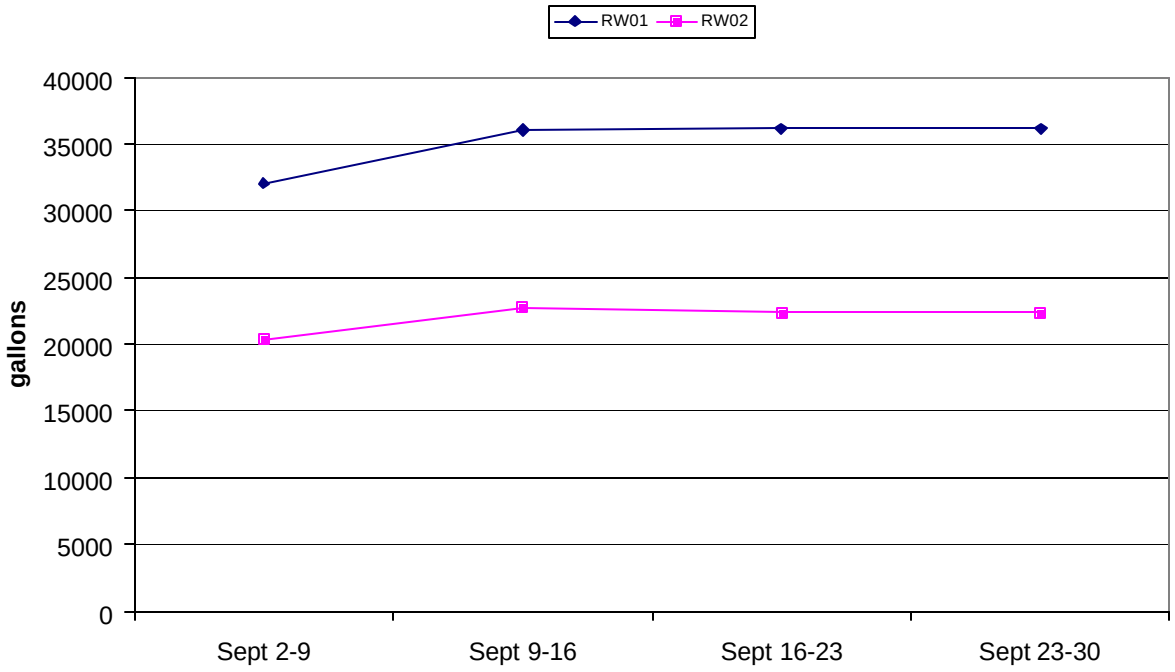

Chart 7. September 2002 Building 100 Ground Water Recovery

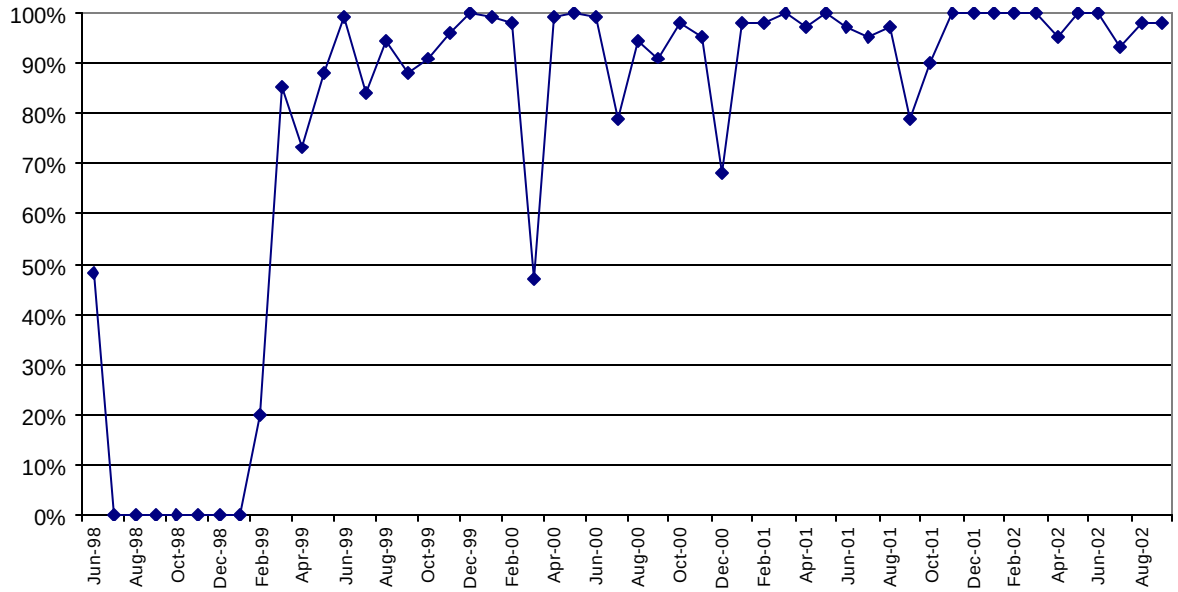

Chart 8. Historical Northeast Site Air Stripper—Percent Time On-Line

Appendix A

Laboratory Reports—July 2002 Quarterly Results

Table A-1. Relative Percent Difference (RPD) for Duplicate Samples

Sample ID	Duplicate ID	Case Number	Constituent	S[a]	D[b]	RPD Value	5 times DL[c]	Fail[d]
PIN12-0521	PIN12-0582	B212812	1,2-Dichloroethane	1.2	1.1	8.7	5	
			Arsenic	0.0038	0.005	27.3	0.05	
			Barium	0.052	0.052	0.0	0.05	
			Benzene	0.22	0.24	8.7	5	
			Chromium	0.005	0.01	66.7	0.05	
			cis-1,2-Dichloroethene	3.6	1.9	61.8	5	
			Dichlorodifluoromethane	1	1.1	9.5	5	
			Lead	0.0047	0.0042	11.2	0.025	
			Methylene chloride	0.36	0.39	8.0	25	
			Toluene	0.17	0.5	98.5	5	
			trans-1,2-Dichloroethene	0.22	0.5	77.8	5	
			Trichloroethene	1.2	1.2	0.0	5	
			Vinyl chloride	1.4	1.4	0.0	5	
PIN12-S32B	PIN12-0581	B212773	1,1-Dichloroethane	22	24	8.7	5	
			1,1-Dichloroethene	5.2	5.5	5.6	5	
			Arsenic	0.072	0.078	8.0	0.05	
			Barium	0.087	0.088	1.1	0.05	
			Chloroethane	0.5	0.3	50.0	5	
			cis-1,2-Dichloroethene	15	17	12.5	5	
			Dichlorodifluoromethane	16	0.5	187.9	5	Fail
			Lead	0.0042	0.0041	2.4	0.025	
			trans-1,2-Dichloroethene	1.8	2.2	20.0	5	
			Vinyl chloride	7.7	8.3	7.5	5	
PIN12-S54D	PIN12-0580	B212757	1,1-Dichloroethene	190	140	30.3	2,500	
			Barium	0.042	0.044	4.7	0.05	
			Cadmium	0.0076	0.0025	101.0	0.025	
			Chromium	0.0074	0.0054	31.3	0.05	
			cis-1,2-Dichloroethene	43,000	45,000	4.5	2,500	
			Lead	0.0018	0.0025	32.6	0.025	
			trans-1,2-Dichloroethene	77	250	105.8	2,500	
			Trichloroethene	15,000	14,000	6.9	2,500	
			Vinyl chloride	2,000	1,900	5.1	2,500	
PIN15-0537	PIN15-0580	B212760	1,1-Dichloroethene	50	21	81.7	500	
			Benzene	14	50	112.5	500	
			cis-1,2-Dichloroethene	11,000	9,800	11.5	500	
			Toluene	130	120	8.0	500	
			trans-1,2-Dichloroethene	32	22	37.0	500	
			Vinyl chloride	4,800	4,300	11.0	500	

Table A-1 (continued). Relative Percent Difference (RPD) for Duplicate Samples

Sample ID	Duplicate ID	Case Number	Constituent	S[a]	D[b]	RPD Value	5 times DL[c]	Fail[d]
PIN15- M27D	PIN15-0581	B212760	Benzene	18	18	0.0	5	
			Ethylbenzene	0.99	0.81	20.0	5	
			m,p-Xylene	2	1.7	16.2	5	
			o-Xylene	0.76	0.8	5.1	5	
			Toluene	1.8	1.5	18.2	5	
PIN15-0515	PIN15-0582	B212774	Methylene chloride	0.34	0.35	2.9	5	
PIN18-0502	PIN18-0650	B212812	Arsenic	0.074	0.078	5.3	0.05	

[a]S = Original sample (N001), VOC concentrations in µg/L and metals in mg/L.
[b]D = Duplicate sample (N002), VOC concentrations in µg/L and metals in mg/L.
[c]DL = Detected limit.
[d]Fail is an RPD greater than "30% and original or duplicate result more than 5 times the detection limit. F=fail.

Appendix B

Laboratory Reports for
Northeast Site Treatment System—July to September 2002

Appendix C

Laboratory Reports for WWNA—July to September 2002

Appendix D

Northeast Site Treatment System Historical Data Table

Table D-1. Historical Summary of Ground Water Recovery at the Northeast Site and Building 100

Report Date	Quarterly (gallons)	Total To Date (gallons)
April–June 1997	356,886	356,886
July–September 1997	1,899,871	2,256,757
October–December 1997	2,265,460	4,522,217
January–March 1998	2,358,081	6,880,298
April–June 1998	1,693,697	8,573,995
July–September 1998	0	8,573,995
October–December 1998	0	8,573,995
January–March 1999	848,912	9,422,907
April–June 1999	1,985,705	11,408,612
July–September 1999	2,158,568	13,567,180
October–December 1999	2,285,471	15,852,651
January–March 2000	1,670,059	17,522,710
April–June 2000	2,031,821	19,554,531
July–September 2000	2,728,441	22,282,972
October–December 2000	2,416,705	24,699,677
January–March 2001	2,977,868	27,677,545
April–June 2001	2,452,063	30,129,608
July–September 2001	2,262,233	32,391,841
October–December 2001	2,374,065	34,765,906
January–March 2002	2,449,505	37,215,411
April–June 2002	2,119,164	39,334,575
July–September 2002	2,211,860	41,546,435

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